

# REVISING BOUNDARY OF YELLOWSTONE NATIONAL PARK

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## HEARING

BEFORE A

SUBCOMMITTEE OF THE  
COMMITTEE ON PUBLIC LANDS AND SURVEYS  
UNITED STATES SENATE

SIXTY-NINTH CONGRESS

FIRST SESSION

PURSUANT TO

### **S. Res. 237**

A RESOLUTION TO INVESTIGATE THE ADVISABILITY OF  
CHANGING THE BOUNDARIES OF YELLOWSTONE  
NATIONAL PARK AND CERTAIN OTHER PARKS

*Dubois*

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AUGUST 18, 1926

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Printed for the use of the Committee on Public Lands and Surveys



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# REVISING BOUNDARY OF YELLOWSTONE NATIONAL PARK

WEDNESDAY, AUGUST 18, 1926

UNITED STATES SENATE,  
SUBCOMMITTEE OF THE  
COMMITTEE ON PUBLIC LANDS AND SURVEYS,  
*St. Anthony, Idaho.*

The committee met, pursuant to call, at 10 o'clock p. m., in the Latter Day Saint's Tabernacle, Senator Robert N. Stanfield presiding.

Present: Senators Stanfield (chairman), Kendrick, and Ashurst, of the committee; also Senator Gooding, Representative Sinnott, Representative Smith of Idaho, and Representative Winter.

The CHAIRMAN. This committee hearing is held under the provisions of S. Res. 237, which was introduced by Senator Gooding and agreed to by the Senate on July 2 last. The resolution reads as follows:

*Resolved*, That the Committee on Public Lands and Surveys, or any duly authorized subcommittee thereof, is authorized to investigate the advisability of changing the boundary of the Yellowstone National Park, and of other national parks with respect to which changes in boundaries have been proposed. For the purpose of this resolution such committee or subcommittee is authorized to hold hearings and sit and act at such places and times; to employ such clerical and stenographic assistants; to require by subpoena or otherwise the attendance of such witnesses and the production of such books, papers, and documents; to administer such oaths and to take such testimony and make such expenditures as it deems advisable. The cost of stenographic service to report such hearings shall not be in excess of 25 cents per hundred words. The expenses of such committee or subcommittee, which shall not exceed the sum of \$3,500, shall be paid from the contingent fund of the Senate. The committee or subcommittee shall make a final report to the Senate as to its findings at the beginning of the second regular session of the Sixty-ninth Congress, together with recommendations for such legislation as it deems necessary.

The bill (S. 3427) providing for the revision of the boundary of the Yellowstone National Park, together with the letter of the Secretary of the Interior thereon, the amendment intended to be proposed by Senator Gooding and Congressman Smith to eliminate the southwest corner of the park for the purpose of erecting an irrigation reservoir, and the report of the Coordinating Commission on National Parks and Forests, will be inserted in the record for the information of the committee at this time, as follows:

[S. 3427, Sixty-ninth Congress, first session]

A BILL To revise the boundary of the Yellowstone National Park in the States of Montana, Wyoming and Idaho, and for other purposes

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled*, That the boundary of the Yellowstone National Park is hereby changed so as to read as follows:

Beginning at park boundary monument zero, on the present north boundary line of Yellowstone National Park, thence easterly along said boundary line to its

intersection with the hydrographic divide immediately north of Pebble Creek, approximately at park boundary monument 29 east; thence following said divide around the head of the drainage of Pebble Creek to its intersection with the present east boundary line of Yellowstone National Park, at a point near park boundary monument 54 north; thence southerly along said boundary line to its intersection with the hydrographic divide between Soda Butte and Cache Creeks, at a point near park boundary monument 51 north; thence easterly along said hydrographic divide to its intersection with the crest of the Absaroka Range; thence southerly along said crest to its intersection with the main hydrographic divide between Little Lamar River and the North Fork of Shoshone River, passing over Republic and Hoodoo Peaks; thence westerly along said divide to its intersection with the present east boundary line of Yellowstone National Park, at a point near park boundary monument 26 north, passing over Notch Mountain; thence continuing westerly along said divide, now between the headwaters of Lamar River and Jones Creek, headwaters of Sedge, Bear, Cub, and Clear Creeks, and the headwaters of Jones and Crow Creeks, and between Crow Creek and Middle Creek, to its intersection with the present east boundary line of Yellowstone National Park, approximately at park boundary monument 18 north, passing over Pyramid and Cathedral Peaks, Mount Chittenden, and Avalanche Peak; thence southerly along said boundary line to its intersection with the hydrographic divide immediately south of Middle Creek, approximately at park boundary monument 15 north; thence westerly along the said divide, now between a southern tributary of Middle Creek, headwaters of Beaverdam, Trappers, and Mountain Creeks, and the headwaters of Canfield and Eagle Creeks, to its intersection with the present east boundary line of Yellowstone National Park, at a point near park boundary monument 5 north, passing over Reservation and Atkins Peaks, Mount Schurz, Mount Humphreys, and Eagle Peak; thence continuing easterly along said divide, now between the headwaters of Mountain Creek, Thorofare Creek, and Yellowstone River, and the headwaters of Eagle and Fishhawk Creeks, Wapiti River (Elk Fork), Ishawooa, Deer, Cabin, Yellow, and Red Creeks, to its intersection with the Continental Divide, passing over Pinnacles, Chaos, and Overlook Mountains, Ishawooa Cone, Kingfisher Peak; thence westerly along said Continental Divide, now between the headwaters of Jay, Atlantic, and Falcon Creeks, and the headwaters of North Buffalo Fork, Pacific, and Mink Creeks, and South Fork Snake River, to its intersection with the present south boundary line of Yellowstone National Park, at a point near park boundary monument 35 east, passing through Two Ocean Pass; thence westerly along said boundary line to its intersection with the right bank of the South Fork Snake River, at a point near park boundary monument 30 east; thence northwesterly along said bank, crossing Lewis River, to the intersection of said bank with the present south boundary line of Yellowstone National Park, at a point near park boundary monument 11 east; thence westerly along said boundary line to the southwest corner of the present boundary of Yellowstone National Park, being south park boundary monument 10 west, thence northerly along the present west boundary line of Yellowstone National Park to its intersection with the left bank of Gallatin River; thence northwesterly along said bank to a point opposite the hydrographic divide between Daly and Teepee Creeks; thence northeasterly across the Gallatin River and along said divide, around the headwaters of Daly, Black Butte, Specimen, and Fan Creeks, to the intersection of said divide with the present north boundary line of Yellowstone National Park, at a point near park boundary monument 11 west; thence easterly along said boundary line to the place of beginning; and

Beginning at the northwest corner of township 44 north, range 115 west, of the sixth principal meridian; thence southerly along the west line of said township to the northeast corner of section 12, township 44 north, range 116 west; thence westerly to the northwest corner of the northeast quarter of the northeast quarter of said section 12; thence southerly and westerly, respectively, on quarter-quarter section lines to the southwest corner of said section 12; thence southerly to the southwest corner of the northwest quarter of the northwest quarter of section 13; thence easterly to the northeast corner of the southwest quarter of the northeast quarter of said section 13; thence southerly on the east quarter-quarter section lines of sections 13, 24, and 25, to the southwest corner of the northeast quarter of the northeast quarter of said section 25; thence westerly and southerly, respectively, on quarter-quarter section lines to the northwest corner of the southwest quarter of the southwest quarter of said section 25; thence westerly to the northwest corner of the southwest quarter of the southeast quarter, section 26; thence southerly to the southwest corner of the southeast quarter of said section



26; thence westerly to the southwest corner of the southeast quarter of the southwest quarter of said section 26; thence southerly to the southwest corner of the northeast quarter of the southwest quarter, section 35; thence easterly to the northeast corner of the southwest quarter of the southeast quarter of said section 35; thence southerly to the southeast corner of the southwest quarter of the southeast quarter of said section 35, all in township 44 north, range 116 west; thence westerly to the northeast corner of the northwest quarter of section 2, township 43 north, range 116 west; thence southerly on midsection lines of sections 2, 11, and 14, to the northwest corner of the southeast quarter of section 14; thence easterly to the northeast corner of the northwest quarter of the southeast quarter of said section 14; thence southerly on east quarter-quarter section lines of sections 14, 23, 26, and 35, all in township 43 north, range 116 west, to the right bank of South Fork Snake River; thence westerly along said bank to its intersection with the north line of township 42 north, range 116 west; thence westerly along said township line to the northwest corner of said township; thence southerly along the west line of said township to its intersection with the main hydrographic divide immediately south of Granite Canyon; thence southwesterly along said divide to its intersection with the main hydrographic divide formed by the crest of the Teton Mountains; thence northerly along said divide, between the headquarters of Moose Creek and Granite Canyon, Fox Creek and Open Canyon, Dirby Creek and Death Canyon, Teton Creek and Taggart and Glacier Creeks, Leigh Creek and Leigh Canyon, Badger Creek and Moran Canyon, to a point where said divide intersects the main hydrographic divide immediately south and southeast of Webb (Moose) Canyon; thence northeasterly along the last-mentioned divide to its intersection with the projected east quarter-quarter section line of what will probably be, when surveyed, section 7, township 46 north, range 115 west; thence southerly along said line to the northwest corner of the southeast quarter of the southeast quarter of said section 7; thence westerly to the northwest corner of the southwest quarter of the southeast quarter of said section 7; thence southerly on projected midsection lines of probable sections 7, 18, 19, and 30, to the southwest corner of the northeast quarter of said section 30; thence westerly to the southeast corner of the southwest quarter of the northwest quarter of said section 30; thence southerly to the southeast corner of the northwest quarter of the southwest quarter of said section 30; thence westerly to the southwest corner of the northwest quarter of the southwest quarter of said section 30, all of township 46 north, range 115 west; thence southerly on projected west line of said township and the west line of township 45 north, range 115 west, to the southwest corner of section 6, township 45 north, range 115 west; thence westerly on projected north line of what will probably be, when surveyed, section 12, township 45 north, range 116 west, to the northeast corner of the northwest quarter of the northwest quarter of said section 12; thence southerly to the southeast corner of the southwest quarter of the northwest quarter of said section 12; thence westerly to the southeast corner of the southwest quarter of the northwest quarter of probable section 11; thence southerly to the northeast corner of the southwest quarter of the southwest quarter of said section 11; thence westerly to the northwest corner of the southwest quarter of the southwest quarter of said section 11; thence southerly on projected west lines of probable sections 11 and 14 to the southwest corner of said section 14; thence easterly to the northeast corner of the northwest quarter of the northwest quarter of probable section 23; thence southerly to the southeast corner of the northwest quarter of the northwest quarter of said section 23; thence easterly to the southwest corner of the northeast quarter of the northeast quarter of said section 23; thence southerly to the southwest corner of the southeast quarter of the northeast quarter of said section 23; thence easterly to the southeast corner of the northeast quarter of said section 23; thence southerly on projected east lines of probable sections 23 and 26 to the northeast corner of the southeast quarter of the southeast quarter of said section 26, all in township 45 north, range 116 west; thence easterly to the northeast corner of the southeast quarter of the southwest quarter of section 30, township 45 north, range 115 west; thence southerly on midsection lines of sections 30 and 31, to the south line of section 31, said township; thence easterly to place of beginning.

And all of those lands lying within the boundary line above described are hereby included in and made a part of the Yellowstone National Park; and all of those lands of the present Yellowstone National Park excluded from the park are hereby included in and made a part of the contiguous national forests subject to all laws and regulations applicable to national forests, and upon acceptance



thereof by appropriate action of the State, jurisdiction for all purposes whatsoever shall be, and is hereby, ceded over the land hereby excluded from the park to the State of Wyoming: *Provided*, That no new roads shall be constructed on the lands hereby added to the park and no hotels or permanent camps shall be authorized or permitted to be maintained on such lands at points not now assessible by roads without specific authority from Congress.

SEC. 2. That the provisions of the act of March 1, 1872, reserving lands for park purposes, the act of July 10, 1890, admitting the State of Wyoming into the Union, the act of May 7, 1894, entitled "An act to protect the birds and animals in the Yellowstone National Park, and to punish crimes in said park, and for other purposes," the act of August 25, 1916, entitled "An act to establish a national park service and for other purposes," and all acts supplementary to and amendatory of said act are made applicable to and extended over the lands hereby added to the park: *Provided*, That the provisions of the act of June 10, 1920, entitled "An act to create a Federal power commission; to provide for the improvement of navigation; the development of water power; the use of the public lands in relation thereto; and to repeal section 18 of the river and harbor appropriation act, approved August 8, 1917, and for other purposes," shall not apply to or extend over such lands.

SEC. 3. That nothing herein contained shall affect any valid existing claim, location, or entry under the land laws of the United States, whether for homestead, mineral, right of way, or any other purpose whatsoever, or shall affect the right of any such claimant, locator, or entryman to the full use and enjoyment of his land: *Provided*, That under rules and regulations to be prescribed by the Secretary of the Interior all bona fide claimants or entrymen shall have the right to graze upon the land herein added to the park and reasonably adjacent to the lands claimed or owned by them, such number of livestock as they have been accustomed to so graze in the past, or as may be reasonably necessary to the use and utilization of their lands, and to secure timber for use on and for the improvement of their lands.

THE SECRETARY OF THE INTERIOR,  
Washington, February 27, 1926.

Hon. R. N. STANFIELD,  
Chairman Committee on Public Lands and Surveys,  
United States Senate.

MY DEAR SENATOR STANFIELD: I have the honor to submit herewith for your consideration and introduction, if deemed proper, draft of a proposed bill to revise the boundary of the Yellowstone National Park in the States of Montana, Wyoming, and Idaho, and for other purposes.

This proposed boundary adjustment is in accordance with the recommendation of the Coordinating Commission on National Parks and Forests approved by the whole membership of the President's committee on outdoor recreation and has the full concurrence of both this department and the Department of Agriculture.

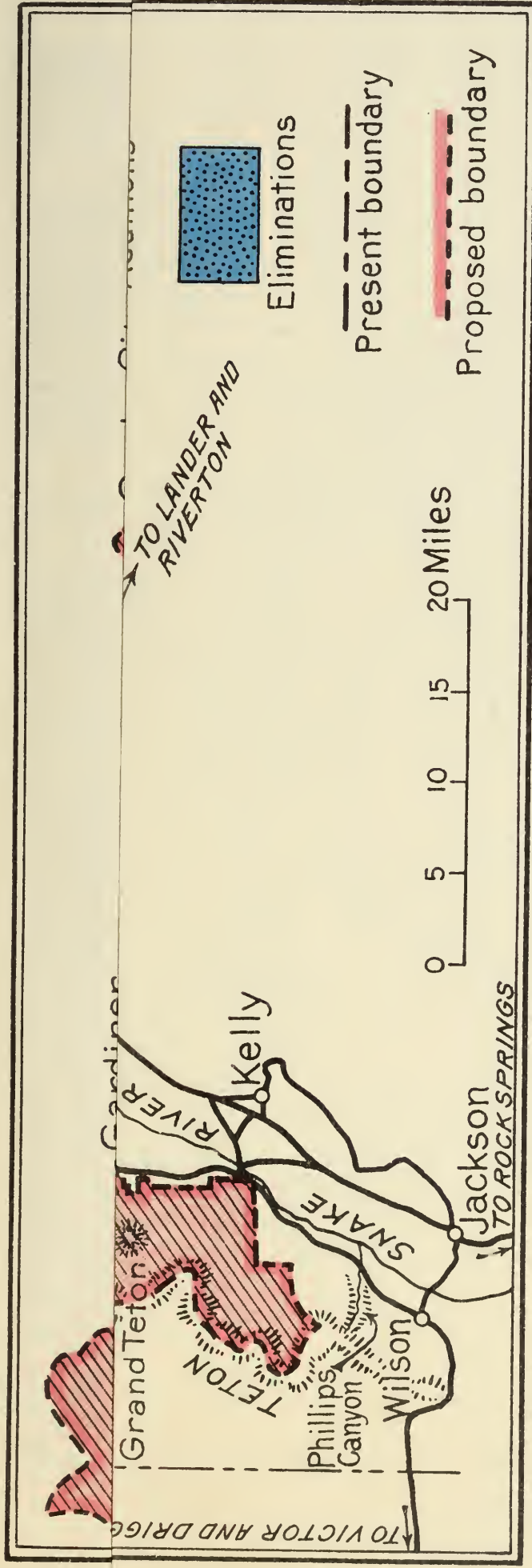
By letter of even date I have also forwarded a similar communication and recommendation to the chairman of the Committee on the Public Lands, House of Representatives.

Very truly yours,

HUBERT WORK.

AMENDMENT INTENDED TO BE PROPOSED TO S. 3427 BY HON. FRANK R. GOODING AND HON. ADDISON T. SMITH TO ELIMINATE THE SOUTHWEST CORNER OF YELLOWSTONE NATIONAL PARK FOR THE PURPOSE OF ERECTING AN IRRIGATION RESERVOIR

On page 4, in line 4, after the word "to," strike out the words "the southwest corner of the present boundary of Yellowstone National Park, being south park boundary monument 10 west," and insert in lieu thereof the following: "a point midway between south boundary monuments 7 and 8 west; thence north to a point intersecting a line six miles more or less east of west boundary monument 13 west; thence easterly about three miles across Bechler River to intersect contour having an elevation of 6,380 feet above sea level, United States Geological Survey datum as now established in Yellowstone National Park; thence



ENGRAVED AND PRINTED BY THE U.S. GEOLOGICAL SURVEY

# PROPOSED ADJUSTMENTS IN BOUNDARIES OF YELLOWSTONE NATIONAL PARK AS APPROVED BY THE COORDINATING COMMISSION ON NATIONAL PARKS AND FORESTS.



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northerly along the said contour across Bechler River; thence westerly along said contour to a point thereon due east of west park boundary monument 10 west; thence directly west to the west park boundary monument 10 west."

#### REPORT OF THE COORDINATING COMMISSION ON NATIONAL PARKS AND FORESTS

The President's Committee on Outdoor Recreation, consisting of the Secretaries of War, Interior, Agriculture, Commerce, and Labor, on February 10, 1925, adopted a resolution providing for the creation of a commission to investigate and report to the committee on all projects under consideration by the Departments of the Interior and Agriculture dealing with proposed enlargements or adjustments of national parks or national forests which involved the interests of the two departments. The commission so created consisted of Dr. Henry W. Temple, Member of Congress from Pennsylvania; Mr. Charles Sheldon; Maj. William A. Welch; Col. W. B. Greeley, forester; and Mr. Stephen T. Mather, Director of the National Park Service. This commission on October 19, 1925, submitted to the chairman of the President's Committee on Outdoor Recreation a report, a copy of which follows:

WASHINGTON, D. C., October 19, 1925.

HON. DWIGHT F. DAVIS,

*Secretary of War and Chairman President's*

*Committee on Outdoor Recreation, Washington, D. C.*

MY DEAR MR. SECRETARY: We have the honor to present the attached report of the Coordinating Commission on National Parks and Forests, created as a result of the resolution approved February 10, 1925, by the President's Committee on Outdoor Recreation. This resolution is as follows:

"Resolved, That the committee called for conference by Assistant Secretary Davis on February 6, 1925, for consideration of recreational questions recommend to the President's Committee on Outdoor Recreation that there be appointed a body commissioned to investigate and report to the Secretaries of Interior and Agriculture and to the President's Committee on Outdoor Recreation on all projects under consideration by either department dealing with proposed enlargements or adjustments of national parks or national forests which involve the interests of the other department; and that the body consist of two representatives from the Department of the Interior, two from the Department of Agriculture, and three persons from the general public, this group of three appointees to be selected by the President's committee from nominations acceptable to the Department of the Interior and the Department of Agriculture, it being understood that at least one of the members selected from the public should be competent to speak with authority regarding the interests of State parks."

The commission has held a number of meetings in Washington and in the field. It met at Cody, Wyo., on August 8, 1925, and undertook the field examination of five projects during the course of August, completing the work at Denver, Colo., on September 8, 1925. Mr. Barrington Moore, of the Council on National Parks, Forests, and Wild Life, represented Mr. Charles Sheldon, who was unable to accompany the commission. Col. B. F. Cheatham, of the War Department, by invitation, represented Mr. Dwight F. Davis, executive secretary of the President's Committee on Outdoor Recreation. Mr. L. F. Kneipp, Assistant Forester, United States Forest Service, represented Col. W. B. Greeley, Chief of the United States Forest Service, in the inspection of the Grand Canyon National Park, Cliff Cities National Park, and Rocky Mountain National Park projects. Mr. Jesse Nusbaum, superintendent of the Mesa Verde National Park, represented Mr. Stephen T. Mather, Director of the National Park Service, in the inspection of the proposed Cliff Cities National Park, and Mr. Roger Toll, superintendent of the Rocky Mountain National Park, represented Mr. Mather in the inspection of the proposed Mount Evans addition to the Rocky Mountain National Park.

Congressman Charles E. Winter, of Wyoming, accompanied the commission in the inspection of the Yellowstone project; Congressman Carl Hayden, of Arizona, on the Grand Canyon project, and Congressman John Morrow, of New Mexico, on the Cliff Cities National Park project.

Public hearings were held at Moran and Jackson, Wyo., at V. T. Park within the Kaibab National Forest, Ariz.; at the Grand Canyon, Ariz.; at Albuquerque, N. Mex.; at Santa Fe, N. Mex.; and at Denver, Colo.



The commission is of the opinion that the results accomplished this summer will promote in marked degree effective cooperation between the National Park Service and the Forest Service. A number of vexatious problems were happily solved, and it is believed that their settlement will pave the way for the adoption of a policy which will more completely coordinate national park and national forest interests.

Very respectfully,

H. W. TEMPLE, *Chairman.*

W. B. GREELEY,

STEPHEN T. MATHER,

BARRINGTON MOORE,

CHARLES SHELDON,

W. A. WELCH,

*Members.*

ARTHUR RINGLAND,

*Secretary.*

The commission agreed that the Park Service and the Forest Service have a common interest in the following program:

#### NEW NATIONAL PARKS OR ADDITIONS TO EXISTING PARKS

Proposed: Shenandoah National Park, Va.; Great Smoky National Park, Tenn.; Cliff Cities National Park, N. Mex.; Big Horn Mountains National Park Wyo. and Mont.; Redwood National Park, Calif.; Sawtooth National Park Idaho; Mena National Park, Ark. Additions: Sequoia National Park, Calif.; Yellowstone National Park, Wyo.; Grand Canyon National Park, Ariz.; Rocky Mountain National Park (Mount Evans), Colo.; Crater Lake National Park (Diamond Lake), Oreg.; Mount Rainier National Park, Wash.; Yosemite National Park, Calif.; Lassen Volcanic National Park, Calif.

#### ACTION OF THE COMMISSION

*Shenandoah National Park, proposed, and Great Smoky National Park, proposed.*—The commission accepted the joint recommendation of the Park Service and the Forest Service that further consideration of these two projects by the commission was unnecessary because (1) there was no conflict on the proposed Shenandoah National Park area; and (2) on request of the Forest Service the National Forest Reservation Commission has rescinded its resolution of 1911 authorizing the purchase of the Great Smoky Mountain area for national forest purposes.

*Mount Rainier National Park.*—The commission gave its approval to a joint agreement between the National Park Service and the Forest Service whereby the boundaries of the Mount Rainier National Park and the Rainier National Forest would, with the consent of Congress, be changed as follows: West of post 84, the Carbon River should be the common boundary. West of post 28, the Nisqually River should be the common boundary, and north of post 59 the White River should be the common boundary. The north half of section 4, township 14 north, range 10 east, should also be added to the Rainier National Park, so as to place the Chanapecosh Hot Springs under national park administration. These changes would add to the park 1,490 acres and would add to the national forest 540 acres.

*Sequoia National Park.*—The commission accepted the joint recommendations of the Park Service and the Forest Service that the boundaries of the enlarged Sequoia National Park should be as suggested in the last Barbour bill, H. R. 4095, Sixty-eighth Congress, modified to retain the southern boundary between the southwest corner of the park and Sheep Mountain.

The commission approves the following recommendations which have been accepted by the Chief Forester of the United States Forest Service and the director of the National Park Service in respect to projects examined by the commission in the field.

*Yellowstone National Park.*—Proposed addition by inclusion of areas from the present Teton, Targhee, and Shoshone National Forests, Wyo.

The commission considered the following points: (1) The desirability of correcting the present arbitrary boundaries of the Yellowstone National Park to conform wherever possible to natural topography; (2) the scenic and wild life values of the watersheds of the upper Yellowstone River and Thorofare Creek,



now a part of the Teton National Forest, but tributary topographically to the Yellowstone National Park; (3) the forest and other economic resources of the region north of the Buffalo River, west of the Continental Divide, and east of the Grand Tetons; (4) the scenic qualities of the Grand Teton Range now included within the Teton National Forest and the high recreational values of the foothill lakes, and approves—

(1) North side boundary: The superintendent of the Yellowstone National Park and the district forester of the United States Forest Service at Missoula, Mont., to confer and recommend a north boundary including Pebble Creek and Specimen Creek (petrified forests) and suggest legislative language to permit completion of exchange of lands with the Northern Pacific Railroad.

(2) East side boundary: The natural boundary following the Absaroka Range (except as indicated on map) from Republic Mountain to Eagle Peak, as jointly recommended by the Park Service and the Forest Service.

(3) West side boundary: The superintendent of the Yellowstone National Park and the district forester of the United States Forest Service at Ogden, Utah, to make a further study of the joint boundary between the Yellowstone National Park and the Targhee and Madison National Forests to determine whether the adoption of topographic boundaries would promote the better administration of the national park and the national forest, their findings to be submitted to the commission for later consideration.

(4) South side boundary: The addition of approximately 200,000 acres to the Yellowstone National Park and now included within the Teton National Forest, embracing the watersheds of the upper Yellowstone River and Thorofare Creek; this region should be administered by the National Park Service as a wilderness area, and to insure this the legislation authorizing the addition should contain a provision prohibiting the construction of roads or the issuance of permits for resorts.

(5) The elimination from the Yellowstone National Park of approximately 25,000 acres south of the South Fork of the Snake River and its addition to the Teton National Forest.

(6) The Grand Teton Range: The addition to the Yellowstone National Park, as a separate unit, of approximately 100,000 acres now embraced within the Grand Teton Range of the Teton National Forest.

*Grand Canyon National Park (north of the Canyon).*—Proposed addition by inclusion of areas from the Kaibab National Forest, Ariz.

The commission considered the following points: (1) The forest and other economic resources of the Kaibab Plateau; (2) the respective needs of the Forest Service and Park Service for central administration sites on the plateau with available water; (3) the need to protect the approaches to the rim of the Grand Canyon and to provide for necessary road development by the Park Service; and approves—

The addition of approximately 45,080 acres to the Grand Canyon National Park (north) by elimination from the Kaibab National Forest, the line to be as set forth on the map.

*Grand Canyon National Park (south of the Canyon).*—Proposed addition by inclusion of a portion of the Tusayan National Forest, Ariz.

The commission considered the following points: The desirability of following natural boundaries in the Havasupai country on the west; the necessities of park road development; and the exclusion of private holdings; and approves—

The acceptance of the boundary line as set forth on map, as jointly agreed upon by representatives of the Park Service and the Forest Service with such minor changes as may be determined by a survey for a right of way through the Martin Buggeln ranch in section 15, township 30 north, range 5 east. This will add from 5,800 to 6,240 acres to the Grand Canyon National Park by elimination from the Tusayan National Forest and transfer an undetermined area of between 3,000 and 4,000 acres from the park to the forest.

*Cliff Cities National Park.*—Proposed creation by the transfer of lands from the Santa Fe National Forest and the inclusion of other lands.

The commission approved postponement of further consideration of the project with a view of getting additional information from the Forest Service and the Park Service.

*Rocky Mountain National Park.*—Proposed addition of the Mount Evans area now included within the Pike National Forest, Colo.

The commission considered the following points: The road development, fire and watershed protection, and recreation plans of the Denver Mountain Parks Commission now in operation in cooperation with the Forest Service; and approves—



(1) The recommendation made jointly to the commission by the Forest Service and the Park Service continuing the present plan of cooperation between the Forest Service and the Denver Mountain Parks Commission with no change in the status of Mount Evans.

(2) And the modification in the boundaries of the existing Rocky Mountain National Park in accordance with the joint recommendations of the Forest Service and the Park Service.

Other projects on the program, such as the proposed addition to the Crater Lake National Park in Oregon and the Yosemite National Park in California, are now in process of adjustment between the Park Service and the Forest Service and have not as yet been presented to the commission for consideration.

The CHAIRMAN. Inasmuch as Senator Gooding, the author of the resolution, is here with the committee, I think it proper that we have a few words from him. [Applause.]

Senator GOODING. Mr. Chairman and members of the committee. I am sure it would be entirely out of place to take up any of your time in the discussion of this question with you here. My day will come later when this committee report is made to the whole committee of the Senate. We are especially fortunate in having with us the chairman, Senator Stanfield, and we are also fortunate in having Senator Kendrick of Wyoming, and Senator Ashurst of Arizona. Senator Norbeck was with us yesterday and went over the grounds, and saw the site; he was compelled, however, to go home this morning. We are also especially fortunate because we have the two branches of Congress represented, Congressman Sinnott, of Oregon, the chairman of the House Committee on the Public Lands, is here with us, and Congressman Winter of Wyoming is also here, and Congressman Smith, whom you all know, is also a member of the Committee on the Public Lands. We are also very fortunate in having these men on the ground where they may see the need of an increased water supply. I want to thank the committee personally for coming here, it has been a very pleasant trip, but these men are all very busy men, they are all business men and have interests to look after and I want to thank them personally and also for you people. They will be able to carry back the facts to the committee of the Senate and Congress. Many can not understand the needs of this country, especially those that have never been in the West, but these western Senators and Representatives will be able to carry the message back, and I want to thank the chairman again and also thank the rest of my colleagues. I thank you. [Applause.]

The CHAIRMAN. I think it would be helpful now if we could have a word from Congressman Smith, as he has been one who has been very active in the movement, not so much in affecting a change in the boundaries of other parks, but in the southwest boundary of the Yellowstone National Park. [Applause.]

Congressman SMITH. Mr. Chairman and members of the committee. I wish on my own behalf and on the behalf of the people of eastern Idaho to thank the members of the committee for visiting our State and the southwestern corner of the Yellowstone Park in order that they may have first-hand information regarding the necessity of the enactment of proposed legislation to transfer from the Yellowstone National Park, the southwestern corner, containing about 12,000 acres, to the national forest in order to permit the utilization of the natural reservoir site within this area for the storage of flood waters to furnish a supplemental water supply to 200,000 acres in Jefferson, Madison, and Fremont Counties in northeastern







Idaho. There has been a difference of opinion regarding the situation which it is hoped may be cleared up as a result of your visit.

Those who are opposing the legislation argue that the farmers do not require this additional water supply to mature their crops, but after viewing the crops on yesterday within this section which have not matured on account of lack of water you are, I am sure, convinced that a supplemental supply of water is necessary in drought years such as in 1919, 1924, and this year if the crops are to be saved. Water is the life blood of the arid West. Without it we can not produce crops, build homes and communities. If eastern Idaho is to continue to develop it is absolutely necessary that the waste water desired by the farmers must be conserved. All they desire is the privilege to construct at their own expense a storage reservoir which will hold back the waste water until late in the summer. The Government has spent millions of dollars to build reservoirs to supply arid lands on the public domain which is being repaid by the farmers, but no appropriation of money is desired nor asked for in this case.

It has been stated by those opposing this legislation that the section it is proposed to eliminate from the park is attractive from a scenic standpoint, but your committee, having viewed that section, know the actual conditions there and will be guided by your own observations, and will not be required to rely upon the judgment of others. As you have observed, the land is low and of a swampy character, in an obscure section of the park which is never visited except by a few fishermen. No water falls or other scenic attractions are in any way involved, as they are on the high lands several miles distant from the reservoir site. In view of the erroneous statements based upon generalities we are glad to have this opportunity of submitting the matter to disinterested men whose views are unbiased and unprejudiced, and who will take into consideration the necessities of the people requiring this waste water for domestic and irrigation purposes. The farmers here assembled wish to have you feel free to ask any questions regarding their need of additional water in order to enable them to save their crops in drought years. Many of them have already lost their farms by reason of nonpayment of taxes and unpaid interest on loans, and more and more will be forced into bankruptcy. If the relief they urge is not afforded them their lands will not be sufficiently productive to make a living for themselves and families. They look to your committee for relief and appreciate this opportunity which has been afforded to present their case in this manner.

The CHAIRMAN. It is very apparent that the question before the committee here is one of great interest to the State of Idaho. This fact is evidenced by the large audience we have at this hearing. It is also evidenced by the fact that your governor is here, and it is only fitting and proper that we should hear from his excellency, Governor Moore. [Applause.]

Governor MOORE. Mr. Chairman, members of the committee, and neighbors of Idaho. It is not my purpose at this time to burden this record with a long talk or to take your time, but I do wish as governor of the State, representing all the people of the State of Idaho, and interested in all problems beneficial to the State to indorse this proposition. As a taxpayer and resident of this town



and one of the developers of this portion of the State for the last 27 years, I wish to indorse this proposition in its entirety.

It has been said that my interest in this proposition is a personal interest, and also that I am interested from a financial standpoint. This is not true, except as a taxpayer of Idaho and a resident of Idaho. Most of my lands are unirrigated, so that I would not be materially affected. In this country it takes cooperation for the mutual development of any section. Every other section should be interested in the development of every other section of the country, as it is no more than right that the people of this great State should benefit somewhat from the natural conditions we have. [Applause.]

Our game department and the people of the entire State have evidenced a great interest in the conservation of the game and birds of this country, has evidenced interest that is favorable with the interest evidenced by the people of any other portion of the country.

We are spending hundreds of thousands of dollars in the building of highways by the help of the Government, who has also spent hundreds of thousands of dollars. We are also spending hundreds of thousands of dollars for the propagation of fish and game, so that the people of the East may be able to drive over our highways and come into and enjoy the fishing and hunting of game here in this section of the country.

Again I repeat, that there is no portion of this country where the people are more interested than the people of Fremont County, in the scenic beauty of the State of Idaho. [Applause.]

There is a great economic problem to be worked out here, but we are willing to leave that to the committee. I have seen more lost in a single year in this country than it would take to completely build a project the size of the American Falls project. [Applause.]

I know this to be a fact. I know as a taxpayer that with the exception of 1918 and 1925 a great many farmers have not been able to pay their taxes, and this is largely due to the shortage of water.

The American Falls country will be taken care of by the construction of that great dam, The people on the South Fork will be taken care of by water from the great Jackson Lake Reservoir—and I want to say that we are very thankful to our sister State of Wyoming for the help they have given us in irrigation—while the people on the Snake River in the valley, from the intersection of the South Fork and the North Fork, north, can never receive any reservoir supply, which they are rightfully entitled to, unless we get this proposition or some similar one. [Applause.]

#### STATEMENT OF WILLIAM C. GREGG, HACKENSACK, N. J.

The CHAIRMAN. Mr. Gregg, please give your name and address to the reporter.

Mr. GREGG. My name is William C. Gregg, I live at Hackensack, N. J., and represent, in so far as national-park interests are concerned, some 22 national park and wild-life organizations of the United States, including such organizations as the American Game Protective Association, Audubon's Society, American Automobile Association, American Federation of Women's Clubs and others.

The CHAIRMAN. You may now proceed with your statement Mr. Gregg.

Mr. GREGG. Mr. Chairman, and members of the committee: For the purpose of the record, I wish at this moment to call attention to the fact that the original resolution which was urged here referring to the proposed changes in the Yellowstone Park, presumably on the report of the coordination commission, of which there is a map here, does not include any change in the southwest corner, I also wish to say that I am heartily in favor of these proceedings here, in order that all may be heard on the matter.

Congressman SMITH. Mr. Chairman may I interrupt the speaker. Referring to the statement that the coordinating commission did not recommend any change in the southwest corner of the Yellowstone Park, I wish to say that they did not have an opportunity nor did they receive an invitation to visit that section. The coordination commission knows nothing from observation of that section and could therefore, make no recommendations.

The CHAIRMAN. Senator Dubois, do you care to say anything at this time?

Mr. DUBOIS. No, not at this time, but I will want to say something later.

#### **STATEMENT OF F. A. MILLER, SECRETARY, FREMONT-MADISON RESERVOIR CO.**

The CHAIRMAN. Mr. Miller, please give your name and occupation to the reporter.

Mr. MILLER. My name is F. A. Miller, and I am secretary of the Fremont-Madison Reservoir Co.

I wish to submit a statement at this time which I have prepared. This statement was prepared by myself as secretary, and is supported by the sworn statements of 10 of the principal canal companies in the area embraced in Fremont and Madison Counties. These are 10 of the principal stockholders in the Fremont-Madison Reservoir Co., which company desires the concession for the building of the reservoir in question. I would like to submit to the committee, as written statements, the one by myself, and also those supporting it by the officers of the canal companies. This is done for the purpose of showing that the Fremont Reservoir-Madison Co. was organized by individual farmers, associations of farmers, irrigation districts, and canal companies incorporated and organized by the farmers in Fremont and Madison Counties; that none of the stock in the Fremont-Madison Reservoir Co. has been subscribed for by any firm, corporation, or association outside of Fremont and Madison Counties; that the lands proposed to be irrigated from the supplemental right; that is, the waters of such reservoir would be for the irrigation of lands, some of which were settled upon more than 45 years ago, and none of which less than 25 years ago; that all of these canal companies, individuals, and associations are composed of farmers and are subscribers to the stock of this corporation, and are farmers within our district. There is no intention to have this water used on any new project. These lands have been cultivated and irrigated for a good many years, but due to the needs of more irrigation and better crops it has required a great deal in the way of additional water, water rights, or supplemental water rights.



I desire to now offer these statements as a part of the record.

The CHAIRMAN. Without objection, the statements will be inserted in the record at this time.

(The statements referred to are inserted herein, as follows:)

F. A. Miller states that he is the secretary of the Fremont-Madison Reservoir Co., and has acted as such for the past four years; that said company was organized under the laws of the State of Idaho in 1919; that it was organized and its capital stock subscribed by the following individuals, associations, and corporations:

Pioneer Ditch Co., Farmers Friend Canal Co., Farmers Own Ditch Co., Harrigfeld Canal & Irrigation Co., Squirrel Irrigation & Canal Co., Marysville Irrigation Co., Dewey Canal Co., Independent Canal Co., John E. Pincock, Conant Creek Canal Co., St. Anthony Union Canal Co., B. T. Jenta, E. & J. Winmill, F. & S. Jacobs, Thompson & Eames, the Enterprise Irrigation District, J. H. Pincock, Salem Union Canal Co., Egin Irrigation Co., Consolidated Farmers Canal Co., Siddoway Irrigation & Manufacturing Co., Teton Irrigation & Manufacturing Co., Stewart & Birch Ditch, East Teton Canal Co., Wilford Irrigation & Manufacturing Co., John Thompson, R. N. Jepsen, Woodmansee-Johnston Rexburg Milling Co., R. H. Neaf, P. P. Worrell, A. D. Winters, E. H. Potter, Teton Island Canal Co., Salem Irrigation Canal Co., Hamilton Bros., Village of Sugar, Idaho, Chester Canal & Irrigation Co., Twin Grove Canal & Irrigation Co., Jed Bird, Alfred Romrell, D. R. Stone, J. W. Archibald, Hugh Stewart, Gus Dayton, Last Chance Canal Co., J. E. Romrell, R. N. Brown, Jacob Neiderhause, C. B. Pincock, John W. Roylance, Alma Roylance, Fall River Irrigation Co., and James Sylvester.

That the subscribers of the capital stock of this company are individual farmers or associations or corporations formed by farmers, residing within the counties of Fremont and Madison, State of Idaho.

That the object for which this corporation was formed is to provide for the erection of a reservoir for the impounding of water to supplement the right or rights already held and owned by its stockholders to the waters of the North Fork of Snake River and its tributaries.

That the said corporation was formed as, and it is a mutual corporation, all of the stock being subscribed by individual farmers, or associations and corporations composed of farmers, within Fremont and Madison Counties.

That the capital stock owned and controlled by the respective subscribers and stockholders does and will represent the quantity of waters to which each shall be entitled of any amount that may be impounded and stored by the said reservoir company.

That all the expenses and charges for the maintenance of the said reservoir company will and must be raised by assessments levied upon its capital stock.

That no person, association, or corporation has subscribed for stock or has become a stockholder in said reservoir company other than persons, associations, or corporations whose members or stockholders now own lands within Fremont and Madison Counties, and who have existing and valid right or rights to the use of the waters of the North Fork of Snake River and its tributaries.

That there is appended to this statement and made a part hereof statements by officers of associations or corporations whose stockholders or members through such corporations or associations have subscribed for more than 50 per cent of the capital stock of this company.

F. A. MILLER.

Subscribed and sworn to before me this 16th day of August, 1926.

[SEAL.]

H. I. ADAMS,  
Notary Public, St. Anthony, Idaho.

G. R. Davis states that he is the president of the Fall River Canal Co., and has been such president for more than 8 years and a stockholder in the said company for more than 20 years last past; that the canal owned by said company diverts water from Fall River, its diversion works being about 4 miles east of Chester post office, Fremont County, Idaho; that it has a decreed right to the use of 23,000 miner's inches of the waters of said Fall River with a priority dating June 1, 1889, such right being reduced to 18,000 inches on the 1st day of each July; that it supplies water for the irrigation of about 11,000 acres in Fremont and Madison



Counties and there are about 135 stockholders, farmers residing upon and cultivating farms along its system of canals.

That this company since 1913 has frequently had its water cut off and has had acute shortages during such years as 1919, 1924, and 1926. An estimate of its loss for the year 1919 being placed at 60 per cent, or approximately \$200,000, for the year 1924 at 30 per cent, or approximately \$100,000, and for the year 1926 at 30 per cent, or approximately \$100,000. The lands supplied irrigating water by this company were settled upon more than 35 years ago and have been continuously cultivated ever since said time.

This company was incorporated in 1885 and is what is known or designated as a mutual corporation, not organized for profit, all the stock being owned by resident farmers, the capital stock representing the quantity of water to which each stockholder is entitled.

The company derives no revenue from any source whatsoever, and all expenses and charges for maintenance are raised by assessments levied upon its capital stock.

This company is a stockholder, or has subscribed for stock in the Fremont-Madison Reservoir Co. and was and is one of the original organizers and stockholders therein, the purpose being to secure a supplemental water right to that already owned by the company.

G. R. DAVIS.

Subscribed and sworn to before me this 16th day of August, 1926.

[SEAL.]

H. I. ADAMS,  
*Notary Public, St. Anthony, Idaho.*

O. W. Winter states that he is the president of the Chester Canal & Irrigation Co., and has been a stockholder in said company for many years, that said canal diverts water from Fall River, its diversion works being about 3 miles east of Chester post office, Fremont County, Idaho. That it has a decreed right to the use of 5,600 miners inches of the waters of said Fall River with a priority dating April 1, 1896; that it supplies water for the irrigation of about 2,000 acres in Fremont County, Idaho, and there are about 25 stockholders, all of whom are resident farmers.

That this company since 1913 has frequently had its supply of water cut off and its supply has been cut off completely each year during the past 10 years except the year 1925. In 1919 its supply of water was cut off on June 15, resulting in a crop shortage estimated at 80 per cent, in 1924 its supply was cut off on the 25th day of June, resulting in a 60 per cent loss and it will suffer a loss of 50 per cent for the year 1926.

The lands supplied with irrigating water by this company were settled upon more than 30 years ago and have been in complete and continual cultivation ever since said first settlement.

This company was incorporated in 1895 and is what is commonly known or designated as a mutual corporation, not organized for profit, all the stock being owned by resident farmers, the capital stock representing the quantity of water to which each stockholder is entitled.

The company derives no revenue from any source whatsoever, and all expenses and charges for maintenance are raised by assessments levied upon its capital stock.

This company is a stockholder, or has subscribed for stock in the Fremont-Madison Reservoir Co. and was and is one of the original organizers and stockholders therein, the purpose being to secure a supplemental water right to that already owned by the company.

O. W. WINTER.

Subscribed and sworn to before me this 16th day of August, 1926.

H. I. ADAMS,  
*Notary Public, St. Anthony, Idaho.*

N. C. Blow states that he is the president of the Farmers Friend Canal Co., and has been a stockholder in said company for more than 20 years last past; that said Farmers Friend Canal Co. diverts water from the North Fork of Snake River, its diversion works being about 4 miles east of St. Anthony, Idaho. It has a decreed right to the use of 12,000 inches of the water of Snake River



with a priority dating February 5, 1902, such right to be reduced to 8,000 inches on the 1st day of each July. That it supplies water from the irrigation of about 3,500 acres in Fremont County, Idaho, and there are about 65 stockholders in said company, all of whom are farmers residing upon and cultivating farms along said system.

This canal company since 1913 has frequently had its water cut off and has had acute shortages during such years as 1915, 1919, 1920, 1921, 1923, 1924, and 1926. Its water supply has been entirely cut off each year since 1913. An estimate of crop losses for the year 1919 under this canal were estimated at 85 per cent, or approximately \$100,000; for the year 1924 at 75 per cent, or approximately \$80,000; and for the year 1926 of 50 per cent, or approximately \$70,000.

The lands supplied with irrigating water were settled upon more than 35 years ago and have been continuously cultivated ever since said time. This company has experienced and suffered water shortages in varying degrees for the past 13 years.

This company was incorporated in 1902 and is what is known or designated as a mutual corporation, not organized for profit, all of the stock being owned by resident farmers, the capital stock representing the quantity of water to which each stockholder is entitled.

The company derives no revenue from any source whatsoever, and all expenses and charges for maintenance are raised by assessments levied upon its capital stock.

This company is a stockholder, or has subscribed for stock in the Fremont-Madison Reservoir Co. and was and is one of the original organizers and stockholders therein, the purpose being to secure a supplemental water right to that already owned by the company.

N. C. BLOW.

Subscribed and sworn to before me this 16th day of August, 1926.

[SEAL.]

H. I. ADAMS,  
Notary Public, St. Anthony, Idaho.

Otto Stegelmeier states that he is the president of the Yellowstone Power & Irrigation Co. and has been a stockholder in said company since its organization; that the canal of said company diverts water from Fall River at a point about 11 miles east of Ashton, Fremont County, Idaho; that it has a decreed right to the use of 5,000 miner's inches of the waters of Fall River, with a priority dating May 1, 1906; that it supplies water for the irrigation of about 6,000 acres in Fremont County, Idaho, and there are about 20 stockholders, all of whom are farmers occupying farms along its canal system.

This company has had its water supply completely cut off each and every year, beginning with the year 1918, and its average water shortage for the years 1919, 1924, and 1925, based upon actual need, will amount to 12,000 acre-feet. In 1919 its crop loss due to lack of water amounted to approximately 65 per cent, for the year 1924 of 50 per cent, and for the year 1926 will amount to 25 per cent.

The lands supplied with irrigation water of this company were settled upon about 26 years ago and have been in complete and continuous cultivation ever since that time.

This company was incorporated in 1905 and is what is commonly known and designated as a mutual corporation, not organized for profit, all the stock being owned by resident farmers, the capital stock representing the quantity of water to which each stockholder is entitled.

The company derives no revenue from any source whatsoever, and all expenses and charges for maintenance are raised by assessments levied upon its capital stock.

This company is a stockholder, or has subscribed for stock, in the Fremont-Madison Reservoir Co. and was and is one of the original organizers and stockholders therein, the purpose being to secure a supplemental water right to that already owned by the company.

OTTO STEGELMEIER.

Subscribed and sworn to before me this 16th day of August, 1926.

[SEAL.]

H. I. ADAMS,  
Notary Public, St. Anthony, Idaho.

Carl Lenz states that he is the president of the Harrigfeld Canal & Irrigation Co., and has been a stockholder in said company ever since the organization thereof; that said company's canal diverts water from Fall River at a point about 13 miles east of Ashton, Fremont County, Idaho. It has a decreed right to the use of 3,000 miners inches with a priority dating August 4, 1900, and 4,000 miners inches with a priority dating May 1, 1906. It supplies water for the irrigation of about 12,000 acres. There are about 25 stockholders all of whom are farmers occupying and cultivating farms along said canal systems.

Except for the year 1925 this company has had its water supply completely cut off during some period of the irrigation season for the past 10 years. Its average shortage of water during said time being about 15,000 acre-feet, which has resulted in crop shortages during each of said years but particularly for the years 1919, 1924, and the present year. Losses to crops for the last-named years averaging upward of 50 per cent.

This company was incorporated in 1900 and is what is commonly known and designated as a mutual corporation, not organized for profit, all the stock being owned by resident farmers, the capital stock representing the quantity of water to which each stockholder is entitled.

The company derives no revenue from any source whatsoever, and all expenses and charges for maintenance are raised by assessments levied upon its capital stock.

This company is a stockholder, or has subscribed for stock in the Fremont-Madison Reservoir Co. and was and is one of the original organizers and stockholders therein, the purpose being to secure a supplemental water right to that already owned by the company.

CARL F. LENZ.

Subscribed and sworn to before me this 16th day of August, 1926.

H. I. ADAMS,  
*Notary Public, St. Anthony, Idaho.*

Frank H. Siddoway states that he is president of the Enterprise Irrigation District formed under the laws of the State of Idaho which particularly provide for the formation and organization of irrigation districts; that said district through its canal diverts water from Fall River at a point about 4 miles east of Chester post office, Fremont County, Idaho; that it has a decreed right for 7,000 miner's inches dating from June 12, 1903. It supplies water for the irrigation of the Enterprise District aggregating 9,200 acres; since 1918 and including said year the water supply has been completely cut off during each of the succeeding irrigation seasons. A survey of its water supply and actual need shows that for the year 1919 it was in need of 27,660 acre-feet in addition to the available supply; 1924 it was in need of an additional 29,220 acre-feet, and its need for the year 1926 will approximate 28,000 acre-feet additional; that for the past 8 years its average need above its present supply would be 18,000 acre-feet annually; that it will suffer a crop loss for the year 1926 of upward of \$200,000 due solely to its lack of an adequate water supply.

This district was organized in 19—, under the law of the State of Idaho providing for the formation of irrigation districts; it derives no revenue from any source whatsoever; all expenses and charges of maintenance are raised by a levy upon the real estate embraced within the district.

This company is a stockholder, or has subscribed for stock, in the Fremont-Madison Reservoir Co. and was and is one of the original organizers and stockholders therein, the purpose being to secure a supplemental water right to that already owned by the company.

F. H. SIDDOWAY.

Subscribed and sworn to before me this 16th day of August, 1926.

H. I. ADAMS,  
*Notary Public, St. Anthony, Idaho.*

George Harrigfeld states that he is the president of the Marysville Irrigation Co., the successor to the Marysville Canal & Improvement Co. (Ltd.), and has been a stockholder in said company for many years; that said company's canal



diverts water from Fall River at a point about 10 miles east of Ashton, Fremont County, Idaho; that it has a decreed right to the use of 16,500 miner's inches of the waters of said Fall River with a priority dating November 5, 1895; that it supplies water for the irrigation of about 20,000 acres in Fremont County, Idaho, and there are upward of 110 stockholders, all of whom are resident farmers along its canal system.

This company, since 1913, has frequently had its water supply cut off and its supply has been cut off each and every year beginning with the year 1918, save and except the year 1925; that its average water shortage for 1919, 1924, and 1926, based upon actual needs, approximate 30,000 acre-feet; that in 1919 its stockholders suffered a loss in crops amounting to 75 per cent, in 1924 of 60 per cent, and in 1926 will suffer a 30 per cent loss.

The lands supplied with irrigating water by this company were settled upon more than 30 years ago and have been in complete and continual cultivation ever since said first settlement.

This company was incorporated in 1920 and took over all of the rights of the Marysville Canal & Improvement Co. (Ltd.), who had constructed a system of canals for what had formerly been a Carey Act project. This incorporation is known as a mutual corporation, not organized for profit, all of its stock being owned by resident farmers, the capital stock representing the quantity of water to which each stockholder is entitled.

The company derives no revenue from any source whatsoever and all expenses and charges for maintenance are raised by assessments levied upon its capital stock.

This company is a stockholder, or has subscribed for stock in the Fremont-Madison Reservoir Co., and was and is one of the original organizers and stockholders therein, the purpose being to secure a supplemental water right to that already owned by the company.

G. HARRIGFELD.

Subscribed and sworn to before me this 16th day of August, 1926.

[SEAL.]

H. I. ADAMS,  
*Notary Public, St. Anthony, Idaho*

Joseph Romrell states that he has been the president of the Wilford Irrigation & Manufacturing Co. for more than 15 years and a stockholder in said company for more than 30 years last past; that the canal of said company diverts water from Teton River. Its diversion works being about 10 miles southeasterly from St. Anthony, Idaho; that it has a decreed right to the use of 6,608 inches from April 1, 1898, and 3,392 inches from June 1, 1884. That it supplies water for the irrigation of about 2,500 acres in Fremont County, Idaho, and there are about 50 stockholders, all of whom are resident farmers.

That this canal company since 1913 has frequently had its supply of water cut off and has had acute shortages during such years as 1919, 1924, and the present year. This shortage has resulted in great financial loss to its stockholders. An estimate of such loss for the year 1919 having been placed at \$95,000, for the year 1926 this loss is estimated at a proximately \$75,000.

The lands this company supplies with irrigating water were settled upon more than 40 years ago and have been continuously cultivated and irrigated ever since said time. This company has experienced and suffered from water shortages in varying degrees for the past 10 years.

The Wilford Irrigation & Manufacturing Co. was incorporated in 1884 and is what is commonly known or designated as a mutual corporation, not organized for profit, all of the stock being owned by resident farmers and the capital stock representing the quantity of water to which each stockholder is entitled.

The company derives no revenue from any source whatsoever, and all expenses and charges for maintenance are raised by assessments levied upon this capital stock.

This company is a stockholder, or has subscribed for stock in the Fremont-Madison Reservoir Co. and was and is one of the original organizers and stockholders therein. The purpose being to secure a supplemental water right to that already owned by the company.

J. E. ROMRELL.

Subscribed and sworn to before me this 16th day of August, 1926.

H. I. ADAMS,  
*Notary Public, St. Anthony, Idaho.*

John Swanstrum states that he is the president of the Farmers Own Ditch Co. and has been a stockholder in said company for many years; that said company's canal diverts water from Fall River at a point about 3 miles south-east of Ashton, Fremont County, Idaho, that it has a decreed right to the use of 600 miner's inches with a priority dating May 1, 1904, and 2,000 miner's inches with a priority dating May 1, 1905, from Fall River. That it supplies water for the irrigation of about 5,000 acres and there are about 50 stockholders, all of whom are farmers occupying farms along said canal.

This company has had its water supply cut off for every year during the past nine years except the year 1925. Based upon actual needs it has been short upward of 7,500 acre-feet for the years 1919, 1924, and 1926, which has resulted in great financial loss to its stockholders. Such loss amounting to 75 per cent in 1919, 65 per cent in 1924, and 40 per cent for the year 1926. The lands supplied with irrigating water by this company were settled upon more than 25 years ago and have been in continuous cultivation ever since said time.

This company was incorporated in 1904 and is what is commonly known and designated as a mutual corporation, not organized for profit, all the stock being owned by resident farmers, the capital stock representing the quantity of water to which each stockholder is entitled.

The company derives no revenue from any source whatsoever, and all expenses and charges for maintenance are raised by assessments levied upon its capital stock.

This company is a stockholder, or has subscribed for stock in the Fremont-Madison Reservoir Co., and was and is one of the original organizers and stockholders therein, the purpose being to secure a supplemental water right to that already owned by the company.

J. A. SWANSTRUM.

Subscribed and sworn to before me this 16th day of August, 1926.

[SEAL.]

H. I. ADAMS,  
Notary Public, St. Anthony, Idaho.

Harry Wright states that he is the president of the Twin Grove Canal & Irrigation Co. and has been such president for more than 12 years last past; that said canal diverts water from the North Fork of Snake River and that its diversion works are about 4 miles east of St. Anthony; that it has a decreed right to the use of 7,500 miner's inches of the water of said North Fork of Snake River with a priority dating June 1, 1892; that it supplies water for the irrigation of about 2,500 acres in Fremont County, Idaho, and that there are about 35 stockholders, all of whom are resident farmers.

That this company since 1913 has frequently had its supply of water cut off and has had acute shortages for such years as 1919, 1920, 1924, and 1926, its supply having been cut off on the 26th day of June, 1919, and on July 4, 1924, and the right not being reinstated thereafter. Its right was cut off on the 26th day of June, 1926, and has not been reinstated up to this date, and estimate of its loss for the year 1919 being placed at 70 per cent, for the year 1924 at 60 per cent, and for the current year at 50 per cent.

The lands supplied with irrigating water by this company were settled upon more than 35 years ago and have been in complete and continual cultivation ever since said first settlement.

This company was incorporated in 1892 and is what is commonly known or designated as a mutual corporation, not organized for profit, all the stock being owned by resident farmers, the capital stock representing the quantity of water to which each stockholder is entitled.

The company derives no revenue from any source whatsoever, and all expenses and charges for maintenance are raised by assessments levied upon its capital stock.

This company is a stockholder or has subscribed for stock in the Fremont-Madison Reservoir Co. and was and is one of the original organizers and stockholders therein, the purpose being to secure a supplemental water right to that already owned by the company.

HENRY WRIGHT.

Subscribed and sworn to before me this 16th day of August, 1926.

[SEAL.]

H. I. ADAMS,  
Notary Public, St. Anthony, Idaho.



Mr. MILLER. In addition to these statements, I would like to offer a map or plat showing the irrigated area in Fremont and Madison Counties, showing the natural watercourses such as the north fork of Snake River, Fall River, and Teton River, the location of the various canals and the diversion points of these canal companies who are stockholders. It will be shown from the statement that they are stockholders in the Fremont-Madison Reservoir Co. This map shows the area, or country, over which your committee proceeded on Monday. The map is in two sections. I would like to offer it as a part of the record.

The CHAIRMAN. It will not be possible to print the map as a part of the record, because it is a blue print, but it will be kept for reference in the committee files at Washington.

Mr. MILLER. The 10 canal companies which have submitted their statements, supplementing the statement of the Fremont-Madison Reservoir Co., have, through their boards of directors, for the years 1919, 1924, and 1926, made a survey or estimate of their crop losses for these years. For the year 1919, the survey of the boards of directors of the said 10 different canal companies of their losses in crops—such survey being only of small grains, seed peas, and hay—the estimate shows the loss to have been \$1,528,000. For the year 1924, these same 10 canal companies estimate the losses to their stockholders at \$1,000,000. For the year 1926, these same canal companies estimated the losses to their stockholders at one-half million dollars.

This estimate has to do with but 10 of the thirty-odd incorporated canal companies who are stockholders of the Fremont-Madison Reservoir Co., and has nothing to do with some 20 other companies. Neither has this taken into account the matter of special crops, such as sugar beets, or potatoes, or others, such as these.

May I have this made a part of the record?

The CHAIRMAN. You may.

(The statement referred to is inserted herein, as follows:)

1919: Estimated losses to farmers under Farmers Friend Canal, Chester Canal, Fall River Canal, Yellowstone Canal, Harrigfeld Canal, Enterprise Irrigation District Canal, Marysville Canal, Wilford Canal, Farmers Own Canal, and Twin Groves Canal, growing grains, hay, and seed peas according to estimates made by the boards of directors of said canal companies, aggregates for the year 1919 the sum of \$1,528,000.

1924: For the year 1924 these same canal companies have estimated their losses, due to water shortage, of the approximate sum of \$1,000,000.

1926: The result of 1926 can not be determined owing to the fact that harvesting has not proceeded far enough to make any accurate figures, but an estimate made by the boards of directors of these same and heretofore mentioned canal companies for this year (1926) fixes the loss to their stockholders (farmers) at not less than \$500,000.

It will be noted that these estimates cover hay, grain, and seed pea crops, and does not cover special crops such as sugar beets and potatoes which require expenditures of from \$50 to \$75 per acre to produce.

It will be noted that these reports and estimates are from but 10 of the canal companies of the area embraced under the Fremont-Madison Reservoir and within the counties of Fremont and Madison, State of Idaho.

Mr. MILLER. In this district a number of seed-pea companies have established headquarters. In fact, Fremont County and Madison County, or I might say the Upper Snake River Valley, has become known as the producer of high-class seed peas; or rather peas used for seed purposes. I have here a statement prepared by the managers of two of the largest of these seed-pea companies operating here in 1919

and since that time. This statement shows the approximate loss in 1919 to the farmers growing peas in these two counties. In that season, they took a direct loss as a result of water shortage of approximately \$780,000. For the year 1924, the farmers in this country—that is, the district proposed to be covered by the Fremont-Madison Reservoir Co.—sustained a loss of \$550,000. I will ask that this statement be made a part of the record.

The CHAIRMAN. Without objection the statement will be made a part of the record.

(The statement referred to is inserted herein, as follows:)

ST. ANTHONY, IDAHO, *August 18, 1926.*

At the request of the committee relative to the penalties coming to the farmers in Fremont and Madison Counties as a result of the water shortages in years 1919 and 1924, our careful research of the situation, causes us to submit the following figures:

In the year 1919 the farmers who were growing peas in these two counties that season took a direct loss, as a result of water shortage, approximating \$780,000.

For season 1924 farmers growing peas that season took an approximate loss, owing directly to water shortage, of \$550,000.

This statement is based upon acreages under old and well-constructed canals which would have had ample water had such storage as the present Fall River Meadow project been operative. Without this protection, about two years out of every five the farmers in these two counties are penalized to approximately this same extent. If this water can be stored rather than run to waste, when it is not needed for irrigation, the taking of such losses will have ended.

F. H. HOPKINS.

JOHN T. WILCOX.

Senator GOODING. Have you the record for 1926, Mr. Miller?

Mr. MILLER. I have not, Senator, because the threshing is not completed.

Mr. GREGG. May I ask something about the gap between the years 1919 and 1924; why not have those years in there?

Mr. MILLER. During the years 1920, 1921, 1922, 1923, and 1925 the area planted to seed peas by the companies has been directed more to districts with older water rights than in the years 1919 and 1924. May I state that the various canals and independent water users in this section had their water rights decreed about 1910 by the courts in this district, and that the rights of some were decreed to date to the use of water farther back than others; that is, they had used the water longer than their neighbors, and their decrees of priority dated farther back; in point of time they were older users. The various companies growing seed in this country can not determine which are the oldest water rights in all instances. However, there are some entire districts which have older rights than others.

Mr. GREGG. I have not had an answer yet as to the report on profits and losses for the years between 1919 and 1924.

Mr. SWENDSEN. The years between 1919 and 1924 were not dry years, Mr. GREGG.

Mr. MILLER. The purpose of my remarks was to call your attention to the fact that the years 1919 and 1924 were strictly losses and that we were not dealing with profits. We lost that amount of money those years; we were not dealing with profits at all—

Mr. GREGG (interrupting.) That is satisfactory; it has been answered satisfactorily.

Senator GOODING. The loss you have shown with the report, Mr. Miller represents only a part of the loss. These farmers, be-



cause they understand that there is likely to be a water shortage, do not have the acreage planted that they would otherwise have, so that the loss is merely a loss of crops planted and not a loss of the failure to plant crops.

Mr. MILLER. Of crops planted only, Senator Gooding; yes.

The CHAIRMAN. You mean that he does not plant what he would if he did not think there would be a water shortage?

Senator GOODING. The loss to the farmers is much greater by reason of the fact that he does not plant as large an acreage as he would if he was not afraid of a water shortage.

Mr. MILLER. A farmer might have had a direct loss in farming operations at the end of the year; any good year he may have had a loss in farming under the present conditions; but this is based upon a crop in a normal year; that is, over the price that he might have received for a normal crop. The idea is an attempt to show that from a loss of water; that is, from not having water, we have suffered this additional loss in addition to any other losses that may have been sustained by reason of poor price or anything of that nature.

As secretary of the Fremont-Madison Reservoir Company there has been submitted to me a statement by Mr. Mark Austin. Mr. Austin is the agricultural agent of the Utah-Idaho Sugar Co. They came into this country a number of years ago and have been contracting for the raising of sugar beets ever since.

The Utah-Idaho Sugar Co. has a factory in Sugar City, which is in Madison County, and they have been contracting with the farmers for the growing of sugar beets. The company itself does not engage in the growing, they simply contract with the farmers for the growing of sugar beets; that is, they contract for a certain acreage of beets and the farmers grow, harvest, and deliver the beets to the company for a fixed price.

I would like to introduce this statement of Mr. Austin to be inserted in the record. It shows that in the year 1919 the price paid to the farmers for their beets, and it is figured on an aggregate acreage with an estimated tonnage, that the loss to the farmers was \$611,369. This has been based upon the amount produced in normal years, and at the same price for the year 1924; based on a normal year, the farmers lost \$200,921. It also gives an estimate for the year 1926, when it is estimated that the farmers will lose \$83,300. I desire to have this statement made a part of the record.

The CHAIRMAN. Without objection it will be made a part of the record.

(The statement referred to is inserted herein, as follows:)

STATEMENT OF MARK AUSTIN, GENERAL AGRICULTURAL AGENT OF THE UTAH-IDAHO SUGAR CO.

The approximate loss to the farmers growing beets for the Utah-Idaho Sugar Co. in Fremont and Madison Counties, Idaho, on lands to be covered with the proposed Fall River Reservoir (Fremont-Madison), is as follows:

In 1919 the farmers planted 6,956 acres, from which they harvested 17,459 tons, or about  $2\frac{1}{2}$  tons per acre. This acreage based upon a  $12\frac{1}{2}$ -ton per acre normal yield would equal 86,950 tons, less 17,459 tons yielded, shows a loss in tonnage of 69,491 tons. Deducting 2 tons per acre for an abnormal growing season, and which occurs during dry seasons, would be 13,912 tons. This tonnage

deducted from 69,491 tons still leaves a shortage or loss of 55,579 tons. This, at \$11 per ton, which was the price paid farmers that year, makes a total loss of \$611,369.

In 1924 the farmers planted 5,861 acres to beets, from which they harvested 32,837 tons, or about  $5\frac{3}{5}$  tons per acre. This based upon a  $12\frac{1}{2}$ -ton per acre normal yield would equal 73,262 tons, less 32,837 tons grown, shows a loss of 40,425 tons, less 2 tons per acre for adverse growing season on account of extreme drouth, amounting to 11,722 tons from the 40,425 tons, leaves a total shortage of 28,703 tons, which, at \$7 per ton, the price paid for 1924, amounts to a loss of \$200,921.

In 1926, on account of the losses previously sustained by the farmers during the dry years above mentioned, and from lack of snow in the mountains for 1926, promising a short water year, the farmers cut their planting to 3,400 acres.

From this planting it is estimated they will harvest from 20,000 to 25,000 tons, or about 7 tons per acre, or a shortage of  $5\frac{1}{2}$  tons per acre. Deducting 2 tons per acre, 6,800 tons, for dry growing season, would still leave a loss of  $3\frac{1}{2}$  tons per acre, or a total loss of 11,900 tons, and this, based upon an estimated price of \$7 per ton, makes a total shortage of \$83,300.

This shows a total loss to the farmers on beet acreage of Fremont and Madison Counties of \$895,860 for the years 1919, 1924, and 1926, due directly to shortage of water for irrigation.

It may be said that it costs the farmers the same to grow a half crop of beets as it does to grow a full crop, the only difference being in haul to market—the cost being from \$50 to \$60 per acre for raising.

During the three years mentioned the financial loss to the farmers of Fremont and Madison Counties from their beet crops alone has been ample to build the proposed reservoir, to say nothing of losses sustained in other crops. And this by reason of water shortage.

MARK AUSTIN.

The CHAIRMAN. Is it your intention, Mr. Miller, to be followed by other witnesses; that is, the witness who prepared this statement? I think it would be enlightening if the committee could be given an opportunity to question them, in order that the report may be gone into in detail. Of course, the report may go into the record, but I am sure it would be enlightening to have these other men make their statements.

Mr. MILLER. Would you like the other witnesses called at this time? I think possibly that it would be better if the witness could be called now and we could proceed with the statement at this time.

#### STATEMENT OF MARK AUSTIN, AGRICULTURAL SUPERINTENDENT, UTAH-IDAHO SUGAR CO.

The CHAIRMAN. You may give your name and occupation for the record.

Mr. AUSTIN. Mark Austin; general agricultural superintendent for the Utah-Idaho Sugar Co.

The CHAIRMAN. Now, Mr. Austin, if you will just review your statement.

Mr. AUSTIN. In preparing this statement I have taken from the records of the company the acreage product and the tonnage produced in normal years, which has ranged from 12 to 13 tons per acre on an average; that is, in this section. In view of the fact that we have dry seasons, which naturally makes for a shortage of water, I deducted 2 tons per acre, not charging that to lack of water. They have taken the tonnage produced and the price paid, charging the balance of the shortage to lack of water, because of the fact that dry seasons do not produce quite as heavy a tonnage. In these dry years in normal seasons it is not quite so heavy even though they may



have a full supply of water. We find that fact from the farmers who have, by reason of prior rights, sufficient water to water a small acreage even in a dry year. So that in making these calculations I have taken that into account so that there would be no question as to the positive and exact record of the loss to the farmers.

Congressman SINNOTT. Mr. Austin, do you mean by dry seasons that there is no rainfall?

Mr. AUSTIN. These dry years usually occur when there is a lack of snowfall.

Senator GOODING. Do you mean dry because there is no water in the canals, Mr. Austin?

Mr. AUSTIN. Yes; they both come together of course.

Senator GOODING. Outside of the springtime we do not care for rain in this country, but what we need is a ditch full of water to use when we need it. What Congressman Sinnott asked Mr. Austin, was whether it was rainfall or lack of rainfall that you called a dry year?

Mr. AUSTIN. I have made this report along the lines that dry years are caused by a lack of snowfall.

The CHAIRMAN. But this does not occur every year, does it?

Mr. AUSTIN. No.

The CHAIRMAN. How frequently did they occur?

Mr. AUSTIN. The three years mentioned heretofore, namely, 1919, 1924, and 1926. Of course, in other years there has been some shortage, but I can not call to memory the exact years, or the exact amount of shortage.

Congressman SINNOTT. You are deducting 2 tons per acre in dry years on farms that have plenty of water. Your deduction is attributed to a lack of rainfall in that year, is it not?

Mr. AUSTIN. Yes, and the fact that it has been unusually warm and unfavorable for the growing of beets.

Congressman SMITH. But the main loss is caused by the shortage of water in the canals?

Mr. AUSTIN. Yes.

Mr. GREGG. Mr. Austin, I understand that on the average the raising of sugar beets in Idaho is very profitable?

Mr. AUSTIN. In normal seasons.

Mr. GREGG. I am speaking of the average, take the last 10 years.

Mr. AUSTIN. It would be very questionable with these three bad years.

Mr. GREGG. Have you people built any new factories in the last 10 years?

Mr. AUSTIN. Yes, one at Shelley.

Mr. GREGG. That was built with the full business knowledge of the conditions which have existed?

Mr. AUSTIN. But it was built in 1917, prior to these three bad seasons, and it is not in the territory affected by this reservoir.

Mr. GREGG. You represent the manufacturers, the sugar beet mills, do you not?

Mr. AUSTIN. Yes.

Mr. GREGG. You are not prepared to say at this time, Mr. Austin, that on an average it has not been a profitable business for the manufacturers or the farmers.

Mr. AUSTIN. I have not gone into the figures for that period.

Mr. GREGG. Are you able to give us any definite figures on the profits and losses and amount for the years between 1919 and 1924?

Mr. AUSTIN. No; I can not.

Mr. GREGG. May I ask you, Mr. Austin, about surface irrigation and subirrigation. Sugar beets take a lot of water as compared to other crops, do they not?

Mr. AUSTIN. They take more water; that is, in the months of August and September.

Mr. GREGG. That is when the pinch comes. The sugar beet is a rather greedy fellow, is he not?

Mr. AUSTIN. I should not say so.

Senator ASHURST. Maybe, Mr. Gregg, he is like the New Jersey mosquito.

Mr. GREGG. Possibly so. Mr. Austin, between surface irrigation and subirrigation which do you favor; which is the most successful, is it surface or sub?

Mr. AUSTIN. I do not think there is any material difference.

Mr. GREGG. You are speaking for the farmers now?

Mr. AUSTIN. Yes.

Mr. GREGG. What is the relative amount of water used between surface and subirrigation, does it not take more water for subirrigation?

Mr. AUSTIN. It does in the early part of the season, until the water level is raised up to take care of the plant, after that I should say it does not take any more water.

Mr. GREGG. If the water level is down 50 feet at the beginning of the season, you have to supply enough other irrigation water to bring the top of the water up to within a short distance of the root of the plant, do you not?

Mr. AUSTIN. Yes; but the water would not be down to 50 feet, or else we could not raise it up in one year.

Mr. GREGG. It varies from 50 to 5 feet, does it not?

Mr. AUSTIN. Or possibly from 5 to 15 feet.

Senator GOODING. That condition does not exist over this upper Snake River Valley, does it Mr. Austin; he is discussing the condition on the Egin bench now?

Mr. AUSTIN. Yes; and also on the south side.

Mr. GREGG. I am trying to determine the amount of water necessary to raise a crop, whether through subirrigation or surface irrigation. Now, the question comes back to the amount of water used by subirrigation and surface irrigation.

Mr. AUSTIN. During the flood-water season—early in the season—subirrigation must be brought up in the month of May in order to insure a crop. Your water level must be over the entire area to insure a crop against drought whether you have any grain in or whether it is beets or potatoes or whatever it might be.

The CHAIRMAN. I think Mr. Austin could answer that by saying, that it requires so many acre-feet; that is to say, it requires so many acre-feet for subirrigation and so many acre-feet for surface irrigation; could you answer it in that way?

Mr. AUSTIN. I would prefer that the State engineer here answer that question.

Senator GOODING. I would like to ask Mr. Gregg if he thinks that these people do not understand irrigation, that is, does he think that



they do not know the best methods of irrigation. I would like to know if you are going to try to show these people that they are not irrigating properly. I am a farmer myself and I am at a loss to know what you are trying to get at. I would like to know what you have in mind; do you question their ability or inability to irrigate, or what are you trying to arrive at? [Applause.]

Mr. GREGG. I have heard a good deal about surface irrigation and subirrigation in the last few days, Senator Gooding, and I was asking which required the most water.

Senator GOODING. Of course, the committee will allow you to ask any question, Mr. Gregg.

Mr. AUSTIN. Mr. Miller just suggested to me that I might not have made myself clear. I want to say that these losses in each case are due to the shortage of water.

Senator GOODING. Have you a report of these canal companies, which will show when they were operating; that is, when the water was turned off in each year for the last 10 years? If you have, then you can go on to show these losses. Of course, you only have to travel over this country to see that it has never had a 100 per cent water right. The homes show that; the homes and the surroundings show that they have suffered as compared with the ones which have had a 100 per cent water right. What we want to do here is to give them all a 100 per cent water right. [Applause.]

I am just going to make the suggestion that, if Mr. Austin could have presented his statement when he got through reading it he might have proceeded with an explanation. This is the manner in which the House and Senate committees operate. Now, I am going to suggest that some one present a statement; that is, that everyone present his own statement himself, so that the committee may get at it direct.

I might say that about 75 per cent of a Senator's time is taken up in listening to people. You are following exactly the same methods here this morning as if you were going to Washington to the hearing. You are on a regular hearing now before one of our congressional committees, and as the chairman has asked me to make this suggestion I am very glad to do so.

The CHAIRMAN. What additional value would this supplemental water right be to the land irrigated; that is, to the land to which it would be applied, I am not speaking from a standpoint of applying it to any particular crop, but as to the value of the land from the standpoint of selling the land. If the land was worth \$100 an acre, how much would this add to it; that is, how much would a 100 per cent water right add to the value of the land.

Mr. AUSTIN. In my judgment at least \$40 to \$50 per acre.

Mr. CHAIRMAN. And how many acres would be benefited?

Mr. AUSTIN. If I remember the figures it is about 175,000.

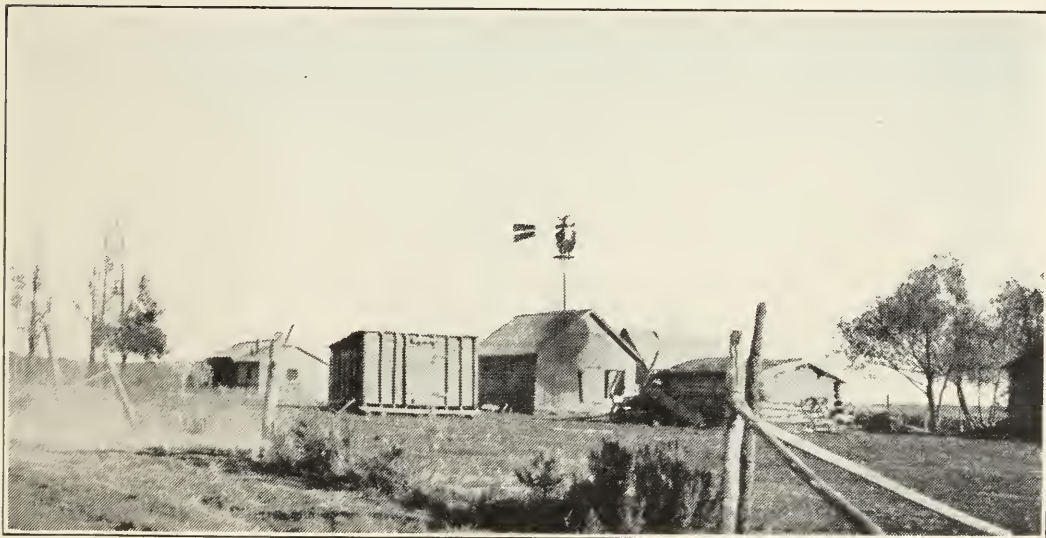
The CHAIRMAN. Then it would be forty times 175,000; that would equal the number of dollars that this would be worth.

Mr. GREGG. Is that in your data?

Senator ASHURST. Let us take for a concrete example the town of Sugar City. Give us the condition there now, Mr. Austin, and the condition that will obtain the remainder of this year; could you give us the condition that would exist if you had a 100 per cent water right?



ABANDONED HOME IN MADISON COUNTY, IDAHO, ON ACCOUNT OF WATER SHORTAGE



HOME OF FARMER IN JEFFERSON COUNTY, IDAHO, WHO WAS FORCED INTO BANKRUPTCY ON ACCOUNT OF CROP FAILURE DUE TO WATER SHORTAGE





HOME OF A FARMER IN FREMONT COUNTY, IDAHO, WHICH HE ABANDONED ON ACCOUNT OF LACK OF SUFFICIENT WATER TO MATURE HIS CROPS

Mr. AUSTIN. If we had a 100 per cent water right and a full planting of beets, as has been the case, the factory would have a 100-day run. This year they will run not more than 20 or 25 days, then the factory will be idle the rest of the time.

Senator ASHURST. Now then, Mr. Austin, give us the number of people out of employment as the result of this.

Mr. AUSTIN. We use during the campaign upward of 200 men; that is, there are 200 men who would work that length of time, but now we will only work 25 days at the most.

Senator KENDRICK. Are you taking into account, in your estimate of the loss, the other conditions and influences that are operating to decrease your beet acreage, such as more profitable crops, the growing of beets, and other kinds of crops.

Mr. AUSTIN. No, I have not taken that into consideration.

Senator KENDRICK. It is a factor; is it not reducing the tonnage of beets received at your factory to-day. Is it not a fact that other crops have become more profitable than beets and for that reason there has been a decreased acreage of beet culture?

Mr. AUSTIN. There is no doubt but that that has had some influence over the acreage planted. And further, in view of the fact that the farmers have found themselves short of water, they have planted crops that mature earlier or that there would be less loss from.

Senator GOODING. But the figures you have shown, Mr. Austin, show the actual acreage planted in 1919 and 1924 and an estimated loss in 1926, does it not?

Mr. AUSTIN. Yes; just the acreage planted. The farmers going to other crops sometimes sustain a loss because of this shortage.

Senator GOODING. I am living on an irrigation project, and I find that I do not cultivate much because there is not enough water to go around. Does that condition prevail on this project, Mr. Austin? In other words, would your acreage be greater if you knew that you were going to have 100 a per cent water right? Are you able to answer that? Is the reason for this shortage of crop, because you knew or understood that you would not have a 100 per cent water right?

Mr. AUSTIN. As to the number of acres not planted by reason of the condition of the water supply, I might say that I have seen some acreage that is not planted at all.

Mr. GREGG. Mr. Austin, about when was the first beet-sugar factory built in this territory?

Mr. AUSTIN. In 1904.

Mr. GREGG. And were there any factories built for several years after that, or were they all built before 1904?

Mr. AUSTIN. One was built in 1903 and two in 1904 and two since that time, but not in this territory.

Mr. GREGG. Not in this territory?

Mr. AUSTIN. There is only one in this territory.

Mr. GREGG. I understand that this water goes below Sugar City.

Mr. AUSTIN. The factory at Sugar City is the only one that is affected by this project.

Mr. GREGG. That is all?

Mr. AUSTIN. That is the only one; all the rest are below the South Fork of the Snake River.

Senator ASHURST. And they get their water from other sources?



Mr. AUSTIN. Yes; from the American Falls Reservoir and the Jackson Lake Reservoir.

Senator ASHURST. I think it is easy to see, Mr. Gregg, why Mr. Austin did not answer your question as to why sugar manufacturing had not been profitable in the last 10 years. There is a peculiar condition that has come up in that time. We had the period of deflation there that wiped out all the profits, and if for no other reason there would have been no profits during that period.

Mr. GREGG. That is true; I was expecting a statement of losses.

Senator ASHURST. And that was through no fault of the manufacturers or the farmers.

Mr. AUSTIN. I might mention that in 1920 beets were \$12 a ton. Sugar sold so cheap by reason of the free trade conditions that the market all over the country was such that sugar cost our company a loss of \$4,700,000, or thereabouts.

Mr. GREGG. Your factory was built before the World War; before these accelerated prices, was it not?

Mr. AUSTIN. Yes.

Mr. GREGG. And as I recall the price was quite steady for a number of years.

Mr. AUSTIN. Yes.

Mr. GREGG. And it was built without any definite plan of the Bechler River Reservoir?

Mr. AUSTIN. When the first factory was built in this territory you mean?

Congressman SINNOTT. Mr. Austin, you say that there are 175,000 acres effected by this project?

Mr. AUSTIN. From the records as I looked over them, if my memory serves me right, that is correct.

Congressman SINNOTT. Do any of these 175,000 acres have a full water right?

Mr. AUSTIN. Yes; I would say so; some few of them do, but by the construction of the reservoir——

Congressman SINNOTT (interrupting). What I want to find out is if the water shortage in a short year affects all the land of this 175,000 acres.

Mr. AUSTIN. I do not think there is anyone under this project who has a full water right; that is, in dry years.

Congressman SINNOTT. You mean in a short year?

Mr. AUSTIN. Yes; in a short year.

Mr. SWENDSEN. That is, none of the 175,000 acres?

Mr. JACKSON. I think that question is covered by another report we have here.

The CHAIRMAN. If you have further statements to offer, I think it would be well if we lay the foundation for the matter and show what the water shortage is.

Mr. MILLER. We will call Mr. Baldwin at this time.

Congressman SINNOTT. It has been suggested to me that the sugar factories of the State are not running; would you explain that?

Mr. AUSTIN. As I have said, in other parts of the State the season has not been altogether favorable to the crop and therefore the crops have not been sufficient to run all the plants.

Mr. SWENDSEN. This is not the only place in the State where the water is short.

Congressman SMITH. I might say at this point that the factories in Twin Falls and Burley are not running because there was a white fly that attacked and destroyed the crops, and that is the reason those factories are not operating this year.

Mr. DUBOIS. I think the factory in Blackfoot closed down because the farmers did not raise enough beets to operate it.

Mr. AUSTIN. And due also to unfavorable climatic conditions and the shortage of water, a number of canals in the Blackfoot territory will be short until the American Falls Reservoir is completed. There are canal companies who have advised their water users that they should not plant crops that required irrigation late in the season.

Congressman SINNOTT. Is that in the Blackfoot country?

Mr. AUSTIN. Yes, they are waiting for the completion of the American Falls project, in order that they may take some of the water.

Senator GOODING. The question has been asked with reference to the shortage of water. Now my understanding is that the report shows the shortage of this crop to be on account of water and nothing else.

Mr. AUSTIN. That is true; yes.

Senator GOODING. There is a general shortage of beet crops because of an unfavorable season, but I understand that your statement shows the shortage is due entirely to the shortage of water.

Mr. AUSTIN. That is right; yes.

#### STATEMENT OF G. CLYDE BALDWIN, DISTRICT ENGINEER, UNITED STATES GEOLOGICAL SURVEY

The CHAIRMAN. You may state your name and occupation for the record, Mr. Baldwin.

Mr. BALDWIN. My name is G. Clyde Baldwin, and my office is at Idaho Falls. I am district engineer, United States Geological Survey, in charge of water measurement works on the Upper Snake River, and special deputy State commissioner of reclamation in general supervision over the water distribution in the Snake River. I am also water master in water district No. 36, which also covers the Upper Snake River Basin down as far as the diversion at Milner Dam. I do not know exactly what you gentlemen would like to know; I have prepared no statement myself, but I am willing to answer any questions that are asked regarding the water shortage in this section. We have a report prepared by Mr. Newell, who is not here to-day but is in Idaho Falls, that covers in some detail the shortage on the respective canal systems which will come under the proposed reservoir. This report was prepared by using data contained in my report, and I have every reason to believe that it is absolutely dependable.

The CHAIRMAN. Can you give us those figures, Mr. Baldwin?

Mr. BALDWIN. This report was prepared in this way: It took the water to which the canals were entitled by taking the capacity of the canal, etc., and they took the period of time when each canal was cut off, when they were not permitted to divert the natural flow of the stream, and summarized that, in order to arrive at the total sufficiency for each canal system in each different year. I can read these totals to you.



Senator GOODING. Have you the names of the canals and the dates?

Mr. BALDWIN. It is quite a long proposition.

Senator GOODING. I would suggest that you go over this, Mr. Baldwin.

Mr. BALDWIN. I think you could get more out of it in reading it individually.

The CHAIRMAN. We would like to know what these shortages are, Mr. Baldwin.

Mr. BALDWIN. Would it be sufficient to just give these totals?

The CHAIRMAN. If you can just give us a summary of these totals showing the shortage it will serve our purpose. I suggest, however, that you also submit the complete statement for insertion in the record.

Mr. BALDWIN. I will be glad to do so.

(The statement referred to is inserted herein, as follows:)

#### SUMMARY OF RESULTS

Separate computations show the following shortages were suffered annually 1918-1926 in this district. Column totals show total annual shortages. All quantities are listed in acre-feet.

Name	1918	1919	1920	1921	1922	1923	1924	1925	1926
Yellowstone.....	500	5,000	1,620	1,430	940	790	4,840	220	5,000
Hartigfeld.....	1,170	5,180	1,990	1,650	1,240	1,530	4,980	-----	5,000
Marysville.....	3,180	28,460	9,920	7,220	4,480	6,500	26,860	-----	28,000
Farmers Own.....	904	7,856	2,632	2,304	1,292	1,800	7,248	32	7,500
Enterprise.....	6,520	27,660	10,240	12,840	11,200	15,740	29,220	7,720	28,000
Bell.....	14	1,036	62	50	44	36	734	26	600
Fall River.....	320	52,440	1,240	1,240	1,080	920	23,480	640	18,000
McBee.....	46	1,882	288	64	58	52	1,660	-----	2,000
Chester.....	1,400	16,220	5,060	3,560	1,680	3,580	14,020	-----	15,000
Silkey.....	-----	2,770	-----	-----	-----	-----	1,350	-----	2,000
Curr.....	-----	826	-----	-----	-----	-----	336	-----	600
White.....	-----	-----	-----	-----	-----	-----	-----	-----	-----
Twin Groves.....	-----	19,960	2,000	-----	-----	-----	16,420	-----	19,000
Farmers Friend.....	5,840	30,800	9,760	10,480	7,840	9,600	29,840	2,640	28,000
All canals, Teton River.....	6,000	95,034	13,342	13,670	13,380	7,024	80,350	4,548	80,000
Annual total.....	25,894	295,124	58,154	54,508	43,234	47,572	241,338	15,826	238,700

As the 1926 season is not completed and it is impossible to tell on what dates the various rights will be restored, the shortages listed in that column have been estimated by supplying restoration dates similar to those of 1919 and 1924.

The needs from which these shortages have been computed have been set arbitrarily for the various months of the irrigation season from a study of past use, without reference to individual canal programs. (See separate analyses.)

Mr. BALDWIN. This statement goes back to 1918; there is no data furnished prior to that time, from 1918 including an estimate of 1926.

The CHAIRMAN. That is year by year?

Mr. BALDWIN. Yes; the sufficiency in 1918 amounted to only 25,894 acre-feet.

Senator ASHURST. Mr. Baldwin, that means this section was short 25,894 acre-feet?

Mr. BALDWIN. Yes.

Congressman SINNOTT. What was the percentage of shortage that year; what percentage of the total?

Mr. BALDWIN. I do not think I can tell you that without some work; it is a relatively small percentage, because that was a good water year.

The CHAIRMAN. These various projects were short 25,894 acre-feet; what was the total requirement for that year?

Mr. BALDWIN. That is not tabulated in a way that I can give it to you. It can be prepared, but this shortage is measured depending upon each year, as I tried to explain before. As the normal flow decreased until it was impossible to supply the canal systems, it was necessary to cut them off.

Senator ASHURST. How many acre-feet were they short in 1919?

Mr. BALDWIN. Two hundred and ninety-five thousand one hundred and twenty-four feet.

Senator GOODING. What is the duty of water, Mr. Baldwin?

Mr. BALDWIN. That is a very indefinite thing. I hardly think you could find an engineer who would be prepared to give you a statement on that.

Senator GOODING. This 25,000 odd acre-feet represents the shortage of water in that year?

Mr. BALDWIN. Yes; that was the shortage.

Senator GOODING. What I want to know is, about how many acres this shortage of 25,000 acre-feet represents?

Mr. BALDWIN. Somewhere in the neighborhood of eight or ten thousand.

The CHAIRMAN. But that does not cover the entire acreage that would be under this project?

Mr. BALDWIN. It is spread over a particular acreage. If you have a failure—that is, a total failure on 10,000 acres; I am presuming now that the requirements are 3-acre feet per season—the head-gate requirement would be more than that, about 5.

The CHAIRMAN. Then this eight or ten thousand acres would only have had about half the supply of water.

Mr. MILLER. May I say here that the period in which these canals were cut varies, so that some were cut in the middle of the season.

Mr. BALDWIN. That is true, the youngest rights are cut first; that is, the youngest rights would be cut earlier in the season while the oldest rights would be cut later; they would be short of water only for late crops.

Senator GOODING. If you have the complete record for one year, showing the date that these canals were closed in that particular year, we would like to have that.

Mr. BALDWIN. I can give you a list of all the canals for 1918, which is a good year:

The Yellowstone Canal was cut on the 31st day of July.

Senator ASHURST. That is, it was shut down.

Mr. BALDWIN. It was cut off; yes. Some of these canals have more than one right; that is, they have two or more with different priority dates. They were cut off altogether on the 31st day of July.

Senator ASHURST. That means that the settlers got no water for the remainder of the year.

Mr. BALDWIN. That is true unless they get water through a trade of some sort.

Senator GOODING. Have the people living under that canal got wells in that part of the project, Mr. Baldwin?

Mr. BALDWIN. Some of them have wells. I am not very familiar with the details.



Senator GOODING. They have to go pretty deep for water in that section, do they not?

Mr. BALDWIN. In a good many places; yes.

Senator GOODING. And a well is very expensive there, is it not?

Mr. BALDWIN. Yes, that is true.

The CHAIRMAN. Very well; now you may proceed, Mr. Baldwin.

Mr. BALDWIN. The Harrigfeld was cut off on the 24th of July; I think the Harrigfeld has more than one right. The Marysville on the 31st of July; the Farmers Own on the 31st of July; the Enterprise irrigation district on the 24th of July; that canal has only one right, they were cut off altogether. The Chester Canal on the 31st of July, and the Farmers Friend on the 24th. That covers the list of canals that were cut off during that particular year.

Senator ASHURST. Here is some data, I presume, prepared by yourself. This is very clear right here; it shows the shortage for each year, does it not?

Mr. BALDWIN. Yes, this report shows that the shortage in 1918 was 25,894 feet; in 1919, which was the worst year from the standpoint of normal flow that we have known back as far as we remember, the deficiency was 295,124 acre-feet—

The CHAIRMAN (interrupting). Over how many acres was that, Mr. Baldwin?

Mr. BALDWIN. That is spread over that entire acreage of 170 odd thousand. For 1920 the shortage was 58,154 acres, and for 1921 54,508 acre-feet. Now, I might say, that all these figures are for the entire acreage that comes under this reservoir. In 1922 the shortage was 43,234 acre-feet and in 1923 it was 47,572 acre-feet. In 1924, which next to 1919 was the worst year from the standpoint of normal flow and irrigation supply, the shortage was 241,338 acre-feet.

Mr. GREGG. Will you please repeat that, Mr. Baldwin?

Mr. BALDWIN. That year the shortage was 241,338 acre-feet, In 1925, which was one of the best years we have had, the shortage was 15,826 acre-feet, while in 1926 the estimated deficiency at the date this report was prepared was 238,700 acre-feet; of course, that is subject to correction.

Senator ASHURST. In 1924 did you have a shortage of 241,338 acre-feet?

Mr. BALDWIN. Yes.

Senator ASHURST. And then it seems you had a good year and then another shortage?

Mr. BALDWIN. Yes.

Senator ASHURST. So you have had two short years and one good year?

Mr. BALDWIN. Yes.

Senator ASHURST. If the waters had been impounded would you have had such shortage, Mr. Baldwin?

Mr. BALDWIN. If the full reservoir capacity is developed, we would not.

Senator ASHURST. But you show that there was a shortage of 295,124 acre-feet in 1919.

Mr. BALDWIN. But in the season of 1918 they would have used very little of that water. If you develop a storage up to the maximum capacity and hold over a quantity of water, you might take care of that extreme shortage, but I hardly think that that would be possible.

The CHAIRMAN. In order that a 100 per cent water supply may be secured, how much greater capacity would you require?

Mr. SWENDSEN. It is understood that stored water is more valuable than the natural flow. You do not require so much storage, so I think the reservoir would adequately accommodate the whole area.

Mr. BALDWIN. This deficiency is over their full right rather than an actual shortage. In other words, an individual could raise a very good crop and still be short a little; that is, be under his decreed right and later on in the season some of the crops mature and do not need as much as they did in the earlier part of the season. But you have to have something to measure this by and the decreed rights was the easiest means of doing so. That is why everything is computed on that basis.

Congressman SINNOTT. In order that we may know and explain it to someone else that this is not an arbitrary statement, what was the process of arriving at this computation; from whom were these figures obtained and how did they obtain them?

Mr. BALDWIN. They are obtained from the annual report of water distribution of water district No. 36.

Mr. SWENDSEN. Upon what were they based?

Mr. BALDWIN. Upon the actual measurement of the water delivered to these canals; that is, delivered in these seasons. This deficiency must be the difference between these measurements and the amount of the right of each canal company; that is, the amount that each canal was entitled to during the season.

Congressman SMITH. Is this district No. 36?

Mr. BALDWIN. Yes; that is, it includes all this land in addition to land in the Twin Falls section. The complete report will show the details you asked for. As I did not prepare the report, I am not quite as familiar with it as I should be.

Congressman SMITH. But it is based on figures taken from your office?

Mr. BALDWIN. Yes.

Mr. GREGG. Is it not true that some men get more water than they actually need?

Mr. BALDWIN. I presume that is true. Some farmers through some showing made at the time the decree was handed down have gotten a bigger decree than some others—perhaps more than was good for them. But good farmers are not going to use more water than they can use beneficially.

The CHAIRMAN. Is it detrimental if he uses too much water to water?

Mr. BALDWIN. Yes.

Mr. GREGG. I notice throughout this country, Mr. Baldwin, that there is more than one seemingly small marsh with a lot of cat-tails growing in it; that is all waste water is it not?

Mr. BALDWIN. Yes, it probably is, but it is probably a low place there, and it may be a place where they are subirrigating; they have to subirrigate the high points as well as the low, and this being a low point the water would naturally gather there.

Mr. GREGG. Then these are all right are they?

Mr. BALDWIN. Yes.



The CHAIRMAN. They can only be eliminated with a perfect system of irrigation, is that right, Mr. Baldwin?

Mr. BALDWIN. There is quite a difference between subirrigating and surface irrigating, you have to contend with the drainage problem they have to provide for taking the water away.

The CHAIRMAN. And that is quite a problem, is it not?

Mr. BALDWIN. Yes, in a subirrigated country. In some countries they have tried just ordinary methods in the development of the country; that is, they have tried to irrigate by surface irrigation. And they would no sooner get the water on the ground than it would disappear, and in some places they have almost gone broke before they started subirrigation systems.

Mr. GREGG. Gravelly soil does not hold the water well, does it?

Mr. BALDWIN. This particular soil does not; but it is of a character that does not give any difficulties relative to drainage that you have on other soils. The subirrigation system does not seem to make the land alkali.

Mr. GREGG. This 5 acre-feet is 60 inches?

Mr. BALDWIN. That depends.

Mr. GREGG. Well, ordinarily?

Mr. BALDWIN. Sixty inches on an acre of ground.

Mr. GREGG. Is that not pretty generous?

Mr. BALDWIN. Well, you have transmission losses; that is, head-gate losses; but that is about an average.

Mr. GREGG. Do you know how that would compare with the average used to irrigate land in the West?

Mr. BALDWIN. I think that is not out of line for land of similar character.

Mr. GREGG. By that you mean an average?

Mr. BALDWIN. Yes.

Mr. SWENDSEN. You take over in the Boise section, their duty runs about  $2\frac{1}{2}$  acre-feet delivered to the land, that means at the Boise River, which means about 4 acre-feet at the head gate.

The CHAIRMAN. Is it not true that different crops take different amounts of water?

Mr. BALDWIN. Yes.

The CHAIRMAN. Oats and wheat do not take as much as sugar beets?

Mr. SWENDSEN. That is true, and alfalfa is one of the heaviest consumers of water, and that is a crop they all have to raise to keep up their land.

Mr. GREGG. But they raise two or three crops; that is, two or three cuttings, do they not?

Mr. SWENDSEN. Yes.

Mr. GREGG. You say they do?

Mr. SWENDSEN. Yes.

The CHAIRMAN. Mr. Baldwin, how much would the acreage value be increased with a 100 per cent water right of the nature which could be impounded in the Bechler River Reservoir?

Mr. BALDWIN. I am not engaged in the real estate business, and it would be difficult for me to say. It would be increased, but I would hesitate to place a value on that, because I have no experience upon which to base an answer.

The CHAIRMAN. You have recited the water shortage for these years. Now, can you state what percentage the crop would be increased?

Mr. BALDWIN. It would be increased to the maximum which could be produced on the land. We will take the worst year, which was 1919, when there was almost a total loss; the crops produced on this land in that year were almost negligible.

The CHAIRMAN. Then it was almost a total failure?

Mr. BALDWIN. Yes.

The CHAIRMAN. You show almost the same shortage for the year 1926; now, how much of a crop shortage will there be this year?

Mr. BALDWIN. I imagine that over this area the deficiency—the shortage of crops which might have been produced, as against that which is actually produced—that they will only get about a 60 per cent crop instead of a 100 per cent crop, which should have been produced. These figures are only estimates, and were prepared some little time ago. I do not think, however, that this year will be quite as bad as these figures indicate.

The CHAIRMAN. There has been some rain since this report was made.

Mr. BALDWIN. We have had some rains which, of course, have helped considerably, and the river flow has been sustained better than we anticipated; it has been better than we could have anticipated.

The CHAIRMAN. But you think that if they had a hundred per cent water supply the crop would be 40 per cent greater?

Mr. BALDWIN. That is my guess; I have only these figures.

Mr. GREGG. You have heard that the crop is a 60 per cent crop?

Mr. BALDWIN. I do not remember of hearing anyone else make the estimate, so that is my own estimate.

The CHAIRMAN. Do you have an idea as to what the total value of these crops are over this section, which would be watered from this supplemental water right?

Mr. BALDWIN. I do not think I would hazzard a guess on that.

The CHAIRMAN. Is there someone who will appear before the committee that has that information?

Mr. MILLER. We will have witnesses to give these estimates.

Congressman WINTER. Something has been said with reference to the increase of land values; I have heard the word "speculation" or "estimation" used. The people ordinarily expect to have a 100 per cent water right, I take it, and would it follow as a fact that in the event the land value was based on a 100 per cent water right then the value would not be increased, would it?

Mr. BALDWIN. That would be true with the older settlers; but the purchasers in recent years should have known that they did not have 100 per cent water rights, though; the earlier settlers thought they had a good water right.

Congressman WINTER. I can see that the ordinary settler expects a hundred per cent water right, and, carrying that whole thing through, it would simply follow that that was the expectations of the owner down through the years.

Mr. BALDWIN. Yes.

Congressman SMITH. Is it not true that transfers of land here have not been between individuals but between the owners and the sheriff?



Mr. BALDWIN. That is true to a great extent; mortgage companies are interested in large bodies of land.

Senator KENDRICK. You say you are connected with the geological survey?

Mr. BALDWIN. Yes.

Senator KENDRICK. What connection did you say you had with the State?

Mr. BALDWIN. I am a deputy to Mr. Swendsen to the extent that I have supervision over the water distribution in this upper Snake River area. I also have the title special deputy, giving me particular supervision over stored water.

Senator KENDRICK. Are you familiar with the topography of the country with respect to this proposed reservoir?

Mr. BALDWIN. Until yesterday, I never visited the site beyond Cave Falls.

Senator KENDRICK. It seems clear to anyone that there is a shortage of water which provides a very serious condition, and as a solution to the problem the question arises with us, as members of the committee, as to whether or not there are any other reservoir sites obtainable with anything like a satisfactory character to supply this needed water for this dry territory.

Mr. BALDWIN. I have made no personal investigation, but my general knowledge and what I have read of Colonel Birdseye's report, I would say that none of the other possible sites were reasonable from a financial standpoint.

Senator KENDRICK. Did you ever make any survey?

Mr. BALDWIN. No.

Senator KENDRICK. Do you know whether there will be any witnesses coming before the committee who will testify on that point?

Mr. BALDWIN. Mr. Miller thinks there will be.

Senator KENDRICK. It is clear that the situation is serious and that an effort should be made to provide water. And water should be provided, but it ought not to be overlooked that this territory was dedicated over 50 years ago to all the people rather than to any group of people, and, therefore, it behooves us to proceed very cautiously and not interfere with that plan of dedication. I am not saying much because of the fact that considerable has been said regarding the scenic beauty of this territory, and on that point I submit that there may be, and, of course, there will be, a difference of opinion. I have heard it said that this area had no scenic value. Personally, I never saw the place until yesterday, but I am impressed with the simple fact that it is the most beautiful meadow I have ever seen; it is a most beautiful place to camp and fish.

There may be other reasons, however, why this territory should be eliminated from the boundaries of the park and made to serve an economic use. But whether other available reservoir sites might be found is to me a serious question; the situation is indeed serious, and I want to say to you here, my friends, that we from your neighboring State of Wyoming are concerned as much in your welfare as if your farmers were men of our own State. And yet, we are tremendously fearful of the fact that when the initial step is taken in this sort of interference with the territory dedicated to the use of the people that there is extreme danger, and any such action

should be given the most careful consideration because of what it means in future years. This park was dedicated many years ago and used by a very few people, but now there is an ever-increasing number of people using it every day. We should proceed very carefully in the determination of this important problem, and I for one intend to try and reach a conclusion regarding it in a thorough way which will do justice to all, and in doing so, I will bear your needs in mind as much as if you were people of my own State. And I believe that if it becomes necessary we can surely meet this issue to supply the needs of these people, but I would rather find a solution elsewhere. So, before we reach the end of this testimony, I should like very much to have figures and estimates by some one who has made a survey of this territory.

Senator GOODING. I have asked Mr. Swendsen to furnish that information for us.

Congressman SINNOTT. I understood you to say that you did not consider the Dog Creek survey as suitable, judging from Colonel Birdseye's report.

Mr. BALDWIN. I would say so from my observation. I think Mr. Swendsen has some additional information to give on that matter.

Congressman SINNOTT. But I want your information or opinion, Mr. Baldwin.

Mr. BALDWIN. The Dog Creek site involves a dam 240 feet high and develops a capacity of 180,000 acre-feet. That dam is to be 2,200 feet long and its cost would run into a good many millions of dollars.

Congressman SINNOTT. Is that the top of the dam that is 240 feet high?

Mr. BALDWIN. I know nothing except what was said about it, I suppose that is the maximum height; that is the way they usually refer to those matters.

Mr. GREGG. Have you ever been there, Mr. Baldwin?

Mr. BALDWIN. No.

Senator KENDRICK. I submit that there are two things to consider in this matter; one would be the carrying capacity and the other the cost. There is also another thing to consider, the available supply of water; anyone having the measurement could give us this information.

Mr. BALDWIN. Judging from Colonel Birdseye's report, the Dog Creek site would be just as good from the standpoint of the availability of water.

Senator KENDRICK. You believe that there would be an available supply to fill this reservoir?

Mr. BALDWIN. It is a little larger, but I think there will be——

The CHAIRMAN (interrupting). Is it the same supply?

Mr. BALDWIN. Dog Creek, being down the stream, gets a little additional branch, but it involves such a tremendously high and expensive dam that the farmers could not build such a structure.

The CHAIRMAN. What is the height, did you say, Mr. Baldwin?

Mr. BALDWIN. Two hundred and forty feet.

The CHAIRMAN. Is there any estimate as to the cost of this dam?

Senator GOODING. I have asked the State engineer to furnish the estimate of the cost.



Congressman SMITH. Have you some late information on this, Mr. Baldwin?

Mr. BALDWIN. I telegraphed our office and have received a reply stating that Colonel Birdseye, in the annual report of the National Park Service, recommends no particular site, but suggests an investigation of the site at the mouth of Dog Creek. This dam would be 240 feet high with a capacity of 180,000 acre-feet and would back the water to Cave Falls.

Mr. GREGG. Can I protest that estimate of cost, or any estimate of cost by people who have not seen the site; they are hardly worth our careful consideration.

The CHAIRMAN. It will be impossible to know the cost on this.

Mr. GREGG. As I understand it the bottom of this dam would be about 500 feet long and the top about 2,200 feet.

Mr. MILLER. Mr. Gregg, the Dog Creek site would require the water being backed up to Cave Falls, which is three-quarters of a mile inside the park boundary.

Mr. GREGG. I have here an estimate of a 185-foot dam at the mouth of Dog Creek, which will back water only to the park boundary: I have some figures on that.

Congressman SINNOTT. I think we could estimate the cost if we knew the amount of material to be removed and the amount of material to be used.

Mr. GREGG. This matter has been before the good people of Idaho for six years, and I suppose that they would have some figures on these various sites.

Mr. MILLER. May I say that all these sites have been investigated.

Congressman SINNOTT. Do I understand, Mr. Gregg, that you are contending that the Dog Creek site is available and feasible so that it could be taken in place of this one?

Mr. GREGG. Absolutely, and we also contend that there are other reservoir sites; I am ready to name a number of locations.

Congressman WINTER. I understand that there are other proposed sites, I for one would be glad to hear the actual figures so as to see whether they are feasible or whether we are wasting our time.

Mr. GREGG. I think we are wasting our time here with Mr. Baldwin.

Congressman WINTER. It is my understanding that the reclamation department have made a report; if that is not the case I would like to know it?

Mr. GREGG. I do not think they have a report on the Dog Creek site.

Senator ASHURST. First I read a letter by Mr. Morris Bien, which is located on page 47 of the Senate Committee hearings held in Washington:

DEPARTMENT OF INTERIOR,  
UNITED STATES RECLAMATION SERVICE,  
Washington, D. C., May 1, 1920.

Hon. ADDISON T. SMITH,  
*House of Representatives.*

MY DEAR MR. SMITH: In response to the request received from you to-day over the telephone, I send you the following information regarding available reservoir sites on the headwaters of the Fall River.

A careful reconnaissance of this entire region has been made in past years by the Reclamation Service, and 14 possible sites were located and surveyed. Of these, six were found outside of the boundaries of the Yellowstone National

Park on small tributaries of Fall River, varying in capacity from 1,000 to 17,000 acre-feet. The combined capacity of all six reservoirs was only 38,000 acre-feet. According to my understanding, this amount of storage is entirely inadequate to meet the needs of the settlers who are seeking to provide storage at the Fall River meadows or Bechler swamp site. It is also evident that the construction of so many reservoirs for such a limited amount of storage is impracticable from the standpoint of cost.

Of the other eight reservoir sites surveyed, all of which are in the park, the Fall River meadow site is the only one which will furnish adequate storage and is the one least subject to objection on the score of impairment of the natural beauty of the park. In fact, as stated in Director Davis's letter of March 18, I can see no objection to the construction of a reservoir at this site either on scenic or economic grounds.

Very truly yours,

MORRIS BIEN.

On the same page there is a letter signed by Mr. Davis, the Director of Reclamation, and with all respect to other men I think that Mr. Davis's opinion is worth as much as anyone's on a reclamation proposition:

DEPARTMENT OF THE INTERIOR,  
UNITED STATES RECLAMATION SERVICE,  
Washington, D. C., March 18, 1920.

HON. ADDISON T. SMITH,  
*Acting Chairman Committee on Public Lands,  
House of Representatives.*

MY DEAR MR. SMITH: In accordance with your request over the telephone this morning, I am submitting the following information concerning the reservoir site known as Fall River meadow, or Bechler swamp, in the southwestern corner of the Yellowstone Park.

This site is desired for the storage of water for irrigation by farmers along the North Fork of Snake River in Idaho, and is well adapted to the purpose. The region is partly covered with timber of little value, and is, in general, swampy. A low range of hills passes through the swampy area, and by closing the gap in these hills it is possible to store a large quantity of water for irrigation. The land that would be submerged by the lake thus formed is mostly of a swampy nature and is unsightly and without any scenic value or economic value that is comparable with its value as reservoir.

The lake that would be formed would be more pleasing to the eye than the natural swamp and would eliminate a considerable area of mosquito-breeding territory. If the embankments proposed to form this reservoir are built in a workmanlike manner and the construction camps and equipment properly cleaned up, the proposed work will be a distinct improvement in the appearance of the region and the road that will be necessary to construct and operate this reservoir will increase the accessibility of the southwestern portion of the park.

I know of no valid objection, either of a scenic or economic nature to the proposed construction and think by all means it should be allowed and encouraged by Congress.

Yours very truly,

A. F. DAVIS, *Director.*

Mr. GREGG. I made the point that as far as I could recall the Reclamation Service had made no report on Dog Creek where Dog Creek enters Fall River; I still stand by that statement. Colonel Birdseye has reported definitely on one point of storage. This report which you make reference to, does it or does it not locate that? Let me suggest that people may differ about these things, one may see a site, one may see something that looks like a reservoir site, and another may disagree with him.

Senator ASHURST. Are you an engineer, Mr. Gregg.

Mr. GREGG. No.

Senator ASHURST. Then, Mr. Gregg, do you propose to put your opinion against the opinion of Mr. Davis, who has served as reclamation director?



Mr. GREGG. Yes.

Senator ASHURST. And you are not of the same opinion as Mr. Davis?

Mr. GREGG. In this, "and is in general swampy."

Senator ASHURST. Well, I saw that, Mr. Gregg.

Mr. GREGG. I disagree with that.

Senator ASHURST. It seems swampy.

Mr. GREGG. I have the report of a very able engineer of the geological survey, who says that there is a storage place on Dog Creek.

Congressman WINTER. Does he give an estimate of the cost?

Mr. GREGG. There is no estimate of the cost.

Congressman WINTER. Are you prepared to make any suggestion as to that, Mr. Gregg?

Mr. GREGG. The cost of the storage will not be any greater than most of the expensive projects of the West, therefore it will not be outside the reach of the people of the West.

Congressman WINTER. But it would be very much greater than the one in Bechler Meadows?

Mr. GREGG. Not being an engineer, I am unable to say.

Congressman WINTER. Well, one is 240 feet high and the other is 40 feet high.

Mr. GREGG. Fifty feet high, I believe.

The CHAIRMAN. It has been proposed that this information is to be brought to the committee, and we can therefore dismiss this from our consideration now with the understanding that it will be furnished later. In order that we may proceed now, is there any other question for Mr. Baldwin?

Senator GOODING. At this time I would like to make the statement that in Gooding the loss from the head gate to the farmers is about 38 per cent. I just want that statement to go into the record.

The CHAIRMAN. Now, are there any further questions to be asked Mr. Baldwin? Thank you, Mr. Baldwin.

#### STATEMENT OF W. G. SWENDSEN, COMMISSIONER OF IRRIGATION, STATE OF IDAHO

The CHAIRMAN. Mr. Swendsen, you may state your name and occupation for the record.

Mr. SWENDSEN. My name is W. G. Swendsen. I am the Idaho State engineer and commissioner of reclamation of Idaho.

The CHAIRMAN. You may proceed with your statement, Mr. Swendsen.

Mr. SWENDSEN. The question of the cost of the reservoir site has recently been discussed, Mr. Chairman, and it occurs to me that perhaps that might first be taken up. I have some opinions as to this matter; that is, on the subject of the cost of the reservoir site in question.

The CHAIRMAN. You state that you are the State engineer of Idaho?

Mr. SWENDSEN. State engineer and State commissioner of reclamation.

The reservoir site, which is located inside of the park and which these people desire to obtain permission to construct this dam upon, requires a dam approximately 47 feet high at the maximum point above the creek bed. In addition to that the length of the main

structure is 3,700 feet. The estimated cost of this reservoir, or the storage, is from five to five and a half dollars per acre. In order to make a definite cost or arrive at a definite cost it would require excavation data and other data. Superficial examination of the formation has been made, the bed rock outcrops frequently and the foundation has been examined, and from these examinations it is regarded satisfactory and favorable. There is no question but what a suitable and satisfactory dam can be located on this site, and from the information gathered, it has been estimated that the cost will amount to from five to five-fifty per acre. Though I know of no definite estimate which has been made of the site at the mouth of Dog Creek, I have before me Colonel Birdseye's report regarding it, which is incorporated in the report of the Director of the National Park Service, addressed to the Secretary of Interior, for the year 1921. This report outlines in effect his findings. In Washington I met Colonel Birdseye and discussed his examination of the site with him, and looked over the plats that he had prepared, and I am sure that he has incorporated in this report all the information he had at that time.

Senator KENDRICK. Do you understand, Mr. Swendsen, that he made a close survey of that location?

Mr. SWENDSEN. No; quite to the contrary, he said it was a hurried survey.

I have taken Colonel Birdseye's report and made certain assumptions as to the type of dam, and have attempted to make an estimate of the cost. There is no information as to the foundation conditions in the report given me, or in any report that I have had access to. They did not give anything except the length and top width, and it was necessary to estimate the bottom width. There is nothing to figure on such as the building of highways or anything of the like.

Mr. GREGG. This question of highways is not before us, it is now built.

Mr. SWENDSEN. I so understand.

Mr. GREGG. I assume that you mean a concrete structure?

Mr. SWENDSEN. No earth dams have proven safe to stand such a pressure as a 240-foot high dam.

Senator KENDRICK. Do you have in mind, Mr. Swendsen, the estimate of the length of that concrete structure?

Mr. SWENDSEN. I assume, in this computation of a 2,200-foot top length, about a thousand feet and in order to make it suitable a top width of about 12 feet and 240 feet below the top, or at least 192 feet in order to make it suitable. That would take 1,726,640 cubic yards of concrete.

Senator KENDRICK. Is it your judgment that it would be necessary to construct this of concrete all the way across?

Mr. SWENDSEN. Yes. I think a dam of that type, Senator, could not be constructed safely of earth.

Mr. GREGG. That is conceded.

Mr. SWENDSEN. I know of no structure of that height that was ever constructed of earth.

Senator KENDRICK. Would this extreme elevation extend across the 1,000 feet?

Mr. SWENDSEN. I have only this information contained in Colonel Birdseye's report. This should be said, however, that the quantity



of concrete I have given does not take into consideration that which would be used in the bed or for footing. I think there are no engineering difficulties in building such a structure if the money is furnished. The concrete in this structure could not be put in for less than \$15 a yard; and on this basis this structure would cost about \$26,000,000, or at the rate of \$144 per acre foot of water, or \$150 per acre for the 170,000 acres. I submit that it does not require any argument to convince anyone that this is impossible.

Congressman WINTER. Would there be an additional cost for canals Mr. Swendsen?

Mr. SWENDSEN. The canals are built but I dare say at a great expense, and I dare say also that that expense has not been paid.

Senator KENDRICK. Do you believe Mr. Swendsen, that the information you have would justify you in making the statement that these figures would be approximately correct?

Mr. SWENDSEN. Assuming that the length and width are as I have stated they would be, and assuming that you would not have to excavate for a foundation.

Congressman WINTER. You are assuming that everything is favorable?

Mr. SWENDSEN. And I should have limited my statement to the 1,000 feet, and assuming that everything is favorable it would still be about 26,000.

Congressman WINTER. Twenty-six what did you say Mr. Swendsen?

Mr. SWENDSEN. Twenty-six million, I should say.

Senator KENDRICK. Is the conservation of this water going to raise any question of water rights in the stream below?

Mr. SWENDSEN. It would not raise any question. The only rights that could be effected are the irrigation rights, and they only exist for about 120 days. The stream flow at this point is adequate to fill this reservoir; there are some records I can read to show this.

Senator KENDRICK. It is your contention that the release of the normal flow during the period of irrigation would suffice to take care of all the rights below?

Mr. SWENDSEN. Yes, if I understand your question correctly it would be necessary for persons building such a reservoir to release the natural flow to satisfy the prior rights.

Senator KENDRICK. That is as I understand you. That is the test of the situation, the rights acquired in the stream below are rights of a normal flow and not reservoir rights?

Mr. SWENDSEN. Exactly, Senator, that is true except for one instance, the American Falls Reservoir, where they also have storage rights—

The CHAIRMAN (interrupting). But there is no evidence of conflict?

Mr. SWENDSEN. That is true, there is no conflict.

The CHAIRMAN. You are figuring on only a supplemental reservoir?

Mr. SWENDSEN. That is true.

Senator GOODING. How many years have you been an irrigation engineer, Mr. Swendsen?

Mr. SWENDSEN. I have been in the active practice since 1901, during which time I have devoted my entire time to it, in the Western States, in Utah, Idaho, and Montana. During eight years of that time I have been State engineer and commissioner of reclamation.

Congressman SMITH. Where did you receive your technical training, Mr. Swendsen?

Mr. SWENDSEN. At the Agricultural College of Utah.

Senator GOODING. You are familiar with irrigation projects in Idaho?

Mr. SWENDSEN. Yes.

Congressman SMITH. Have you worked on any large construction jobs?

Mr. SWENDSEN. Yes; in 1902 or early in 1903 I took the examination for the United States Reclamation Service, shortly after the act was passed, and was designated as an engineer in the service. I spent some time in that service, until about March, 1906, at which time I was employed by a hydroelectric power company engaged in the building of pipe lines, dams, and various other constructions, some costing millions of dollars. The largest was the one in Idaho, known as the Grace Dam.

Senator GOODING. What I want to get at, Mr. Swendsen, was how impractical it is for these people to go out and get \$26,000,000 to build this dam; they can not go into the money market. They are proposing here to build a dam, and they are not asking for Government aid. These people could not go out and borrow \$26,000,000, it is impossible because no bond house would consider it. It would take an interest charge every year of about \$2,000,000. It is impractical and impossible for them to consider it; they can not even think about it. They are not going to get any money—whatever amount they need—for less than 6 per cent. In other words, the building of this dam is so great an undertaking that it could not be thought of. These people are not asking the Government to construct this structure.

Mr. GREGG. Why not have the Reclamation Service build it?

Mr. SWENDSEN. They could not induce me to ask the Reclamation Service for such a thing.

Mr. MILLER. Even at that price the people are having a hard job to raise the money to construct this dam.

The CHAIRMAN. I understand that the people are to pay for this construction, and they should pay for it.

Mr. GREGG. May I ask, Mr. Swendsen, if the same proposition would apply as you found conditions in Winegar Hole?

Mr. SWENDSEN. I am not sure that I know where it is, Mr. Gregg. There is nothing there I am sure which makes a reservoir site stick out like a sore thumb.

Mr. GREGG. Well, Winegar Hole is a very definite point.

Mr. SWENDSEN. I have the report of Colonel Birdseye, but I passed that up as not being feasible.

Mr. GREGG. Let me ask you a question, Mr. Swendsen: If we find half a dozen places outside Yellowstone Park, approximately the same or similar to Dog Creek, you say the cost will be approximately the same, or will be approximately what you say. I want to say that this is very depressing, I ask this because the chances of getting the Bechler Reservoir are very indefinite, it is a very indefinite matter; it has been up here for six or seven years; that is, it has been before the good people now for about seven years.

Governor MOORE. We have not quit trying, though, Mr. Gregg.

Senator GOODING. No; we have only started.



Mr. GREGG. But in the event that another seven years rolls around and you have not been able to effect an invasion to Yellowstone Park, how are you going to get this outside storage?

Senator KENDRICK. I want to suggest in answer to the gentleman from New Jersey (Mr. Gregg) that some of the funds derived for this reclamation fund comes out of the reserve owned by some of our States.

Mr. GREGG. And the sale of public lands.

Mr. SWENDSEN. Yes; and the other reservoirs.

Mr. GREGG. A large part of it comes from the sale of public lands.

Senator KENDRICK. There has hardly been enough of it to pay the expense of the public bureau; most of it has come out of the reserve and a lot owned by the State of Wyoming.

The CHAIRMAN. During which time New Jersey did not contribute a cent.

Mr. GREGG. Do you recall the amount of reclamation money derived from the sale of public land? I am under the impression that it is quite large.

Senator KENDRICK. At the present time it is——

Congressman WINTER (interposing). From the beginning the amount has been about \$100,000,000, the amount contributed under the last bill is about \$50,000,000, while the total amount expended on reclamation is about \$155,000,000.

Mr. GREGG. Making a grand total of the investment of approximately \$200,000,000, of which about one-half has been from the sale of public lands.

Congressman WINTER. The receipts from the public land are very small——

Senator GOODING (interrupting). And during that time we have spent a billion dollars in the building of rivers and harbors. Much of that has been in the east—some of it in New Jersey—and I want to say that I am thoroughly in accord with that. I anticipate that we will pass another bill.

Congressman SMITH. And none of that money comes back to the Treasury.

The CHAIRMAN. It must be obvious to all that the conclusion which is finally reached in this matter will depend entirely upon what is for the greatest good of the greatest number of people. And I sincerely hope that you will furnish this committee with all the valuable information possible and that you will provide us with whatever information you have in your possession.

The hour has arrived for us to recess for lunch, we will, therefore, stand in recess at this time until 1.30.

(Thereupon at 12.35 p. m., a recess was taken until 1.30 p. m. of the same day, Wednesday, August 18, 1926.)

#### AFTER RECESS

The committee reconvened at 1.30 o'clock p. m., Wednesday, August 18, 1926, pursuant to the taking of the recess.

The CHAIRMAN. The committee will now come to order.

STATEMENT OF W. G. SWENDSEN, COMMISSIONER OF IRRIGATION, STATE OF IDAHO—Resumed

Mr. SWENDSEN. I think in the discussion just before the recess we had just reached the other reservoir sites referred to in Colonel Birdseye's report, the site known as Winegar Hole.

Just outside of the park boundary at this site, the Colonel indicates the existence of a base where a dam 225 feet high and 22,000 feet long would impound 130,000 acre-feet of water. Absolutely, this site from the standpoint of the dam alone is less feasible than the Dog Creek site, previously discussed, and its cost would, therefore, in my opinion be greater. Another difficulty exists, in that it is not on the main stream of Fall River but on a small stream known as the Winegar Stream, and the Colonel points out that it would be necessary to build a diversion canal to fill this dam or reservoir. In this, his report leads us to the conclusion that it is wholly unfeasible, and I doubt if it is sufficiently attractive to be entitled to any consideration. In respect to the other reservoir sites that might be employed, I might make this statement as an officer of the State of Idaho—I am sure, gentlemen of the committee, that the statement I am about to make will be the sentiment of all of the people affected by this project—that we are just as deeply interested and as anxious to obtain this water from some other source without interfering with the Yellowstone National Park as anyone else. We have exhausted our resources in trying to find other places and in this we have failed. I want to suggest as an officer of the State of Idaho, that I would gladly entertain such information as anyone might have. We would welcome any information that Mr. Gregg or any other person might have, and we would welcome any cooperation that the Department of the Interior or any other division of the Government might give to thoroughly studying these sites and any other available places of storage, in order to obtain the undisputed site. I would only impose this condition and that is, that it is highly important to these people that no further material delay in this matter be had. I think that this study should be made early so that the information could be available for the next session of Congress. My department would be glad to enter into this matter and join with any department of the Government or any individual in making this study so that the report could be made.

The CHAIRMAN. Undoubtedly this matter will be taken up at the next session, and I can assure all of you people that this committee is very anxious to have it entirely disposed of.

Mr. SWENDSEN. If I might refer again to the Fall River Meadows dam site, and in suggesting the design of this dam, I might say that myself and the others connected with it have not disregarded the use that might be made of this area for recreational purposes. We have in mind a plan that will add to the beauty of the landscape; the site lends itself well to an earthen dam, and evidently such a dam would blend very well with the landscape. Such a dam could be planted to grass and so on, and would not present an unsightly condition by any means to the reservoir site.

We have heard considerable criticism of this in the Jackson Dam. There is some unmerchantable timber that will be submerged in this dam; the plan now is to remove this timber. I think it well to



suggest that if this area is removed from the park it will not revert to the State of Idaho or the State of Wyoming but to the Government as forest reserve, in which event we might then ask for a right of way from the Forest Service. They would then tell us what to do with this site, and could require us to take off the timber; that is, to take all the timber off the site, which by the way we desire to do. I have indicated the type of dam that we have in mind, and I might suggest now that if this area is taken out of the park a part of it will be a part of the State of Wyoming and we could not erect this dam without the approval of that State. If Wyoming wants to come in and make any suggestions as to the type of dam, the safety of the dam, etc., that would be their privilege, and I am sure we would welcome them.

We have heard about a highway. I think the committee is familiar with the testimony of Mr. Albright when he appeared before them, in which he stated that the construction of this reservoir would not interfere with the building of the highway. This is true; the highway could be built right along the side just the same. There would be no objection to this, and it might be added that we could possibly provide a highway across the top of the dam, and a highway could easily be provided around the reservoir or dam. I can conceive of some considerable scenic value of this pool or lake of water. It would also be of considerable value for tourists who might visit this section; for example, our best fishing is in our reservoirs that have been constructed, and they are the best places for the propagation of fish. You can go on some of these reservoirs that have been constructed and there you will find hundreds of people enjoying themselves. This will be true of this particular reservoir, and to a greater extent than some others, because it would only be during the extremely dry weather that this reservoir would have the water drawn out to any great extent at all. And during a shortage of water—that is, a shortage based on the natural flow, if we had this storage water—a foot of water taken out would amount to about 2,500 acre-feet of water—we would not draw more than 2 or 3 feet out of the lake to supplement the water needed. So that instead of finding this reservoir empty it would be full or practically so.

We also have in mind a plan which would make it impossible to drain this reservoir. We have had in mind its value for the propagation of fish and also for a bird sanctuary. This type of dam would make it impossible to completely drain the reservoir. This, of course, can not fully be determined until further study is made of the things we have in mind.

We want to put this site in just as nice and attractive a condition as we can, and I might say, that if anything, we will improve the site considerably from a recreational standpoint. I think I might suggest that the area eliminated from Yellowstone Park by this project will still be available for a camping site. And, of course, this will still be left in the national forest, which now constitutes the biggest part of the area to be withdrawn.

Congressman SINNOTT. Will any of the meadows be submerged? It will occupy some 5,000 acres.

Mr. SWENDSEN. Quite an area will not be.

Congressman SMITH. Mr. Swendsen, do you think it would be comfortable and safe to camp in there in a dry year with the grass dry, and build fires on these meadows?

Mr. SWENDSEN. Certainly, if it is used for that purpose, it would be necessary to provide very stringent regulations, and somewhat restrict the activities of the campers.

Now then, if I may speak on the question of the water supply for this reservoir. I think I indicated that the water supply, or the run-off from the Bechler River was sufficient to more than fill the proposed reservoir, and to confirm that statement I want to refer to the records of the United States Geological Survey. At some distance below a measuring station has been maintained by the Government. By deductions and calculations we find that the area of the water shed is approximately 60 per cent of the total area which has been pointed out, and from which these measurements are taken. These records are available for the years 1902 to 1919, the last year of the record. My analysis of other records disclosed that it was lowest in the year 1905, at which time I find that the discharge for 11 months at the proposed dam site on Bechler River was 284,820 feet.

Congressman SINNOTT. What month was embodied in that?

Mr. SWENDSEN. Part of December and January. This record may be found in the United States Geological Survey Reports, pages 85, 100, 178, 252 and 272; I think the date of that was 1918. In my opinion there is no question but what the water supply is sufficient to fill the reservoir at this place and allow water to pass. Referring to the lands that are covered by the Fremont-Madison Reservoir Co., Mr. Baldwin has some figures that I think would be very helpful. We are thoroughly satisfied that other practical sites do not exist, but we are willing to leave this to the committee——

Senator KENDRICK (interrupting). Has the question been raised as to the advisability of making other investigations of these other sites?

Mr. SWENDSEN. I made a tender on the part of the State, Senator Kendrick, and I suggested that we would welcome cooperation from the Interior Department, or any other department that would assist in gathering that information.

Senator KENDRICK. It seems to me, that when the committee comes to consider the elimination of this territory from the Yellowstone National Park, it will be necessary for us to have the facts I have suggested by my question, and, also, that these facts could and should be obtained by authorized and qualified agents whose actions would be far removed from prejudice; that is to say, that the people of this State, which might be called an interested party, could be represented by their reclamation department, and the others—those who might be called disinterested—could be represented, and they could proceed with the investigation as to the advisability of these other sites.

Mr. SWENDSEN. I have made the suggestion, Senator, that we would welcome such an investigation, with the consideration and understanding, of course, that there should be no unnecessary delay.

The CHAIRMAN. More than three months will intervene now before this committee convenes again.

Mr. SWENDSEN. That should be time enough to investigate these other sites unless it would be necessary to investigate the foundation. (See page 71.)

The CHAIRMAN. Have you any information as to how much the average loss is by reason of an insufficient water supply, Mr. Swendsen?



Mr. SWENDSEN. Yes, Senator, I have given that matter some consideration and I think I can give an opinion on that. In the course of my official duty I had occasion to sit on a board of survey and adjustment of all Government projects in Idaho, and I think that the basis of payment from the farmer to the Government should be on the basis of crop return, so we considered the annual crop return on one-half million acres of land. After this survey, and after having the records of the reclamation service, and after having gathered the data as to crop returns we applied to these the prices for the crops. We then made our deductions, and the results were that the crop returns of the Boise project and Minidoka project were \$40 a year over a period of 10 years. We have the report of the various canal officials in this territory of the loss per acre and the crop loss per acre in dry years, such as 1919 and 1924, and there is a somewhat lesser loss this year. My belief is that the crop loss due entirely to lack of water is probably not less than 50 per cent of the growth, which if reduced to a matter of dollars and cents would be \$20 per acre.

Senator GOODING. Who are the other members of this board, Mr. Swendsen?

Mr. SWENDSEN. Doctor Widsopoe, and Mr. Wise, an engineer in the Reclamation Service who was manager of the North Platt project in Nebraska. We also had engineers on each of the projects, Mr. Darlington, of Minidoka project; Mr. Bond, of the Boise project; and the engineer at King Hill, I have just forgotten his name now.

I think I should state that the crop loss I have mentioned or referred to would be entirely eliminated in this territory by reason of this reservoir, and many losses could be overcome with storage rights that can not be by the natural flow. There are many advantages that come from a storage reservoir, such as a holding of water from one year to another year where, for instance, if John Doe has a normal flow right he may curtail the use, or cease using the water for a few days and ask that it be retained in the reservoir and there have it stored for his later use on the later crop.

Congressman SINNOTT. Is there any question as to the water that can be stored in the Dog Creek site, in case it was favorable?

Mr. SWENDSEN. I think that possibly there is. I have known Colonel Birdseye for a number of years and have a very high regard for his word; he said this was a very preliminary work.

Congressman SINNOTT. It occurs to me that it would be advisable to file a supplemental report setting out other information of this site and also the estimate of the cost of the dam.

Mr. SWENDSEN. If the committee would like this report, I can get it. (See p. 71.)

The CHAIRMAN. We would like it as detailed as possible.

Mr. SWENDSEN. If the committee should like more data I can and will gladly get it.

The CHAIRMAN. It occurs to me that the committee would not want to rest its case on the Dog Creek Reservoir on what has been given here, it is so meager.

Mr. SWENDSEN. How soon would you like such a report?

The CHAIRMAN. We will meet in December.

Mr. SWENDSEN. We would have to get it before that time if we got it to you.

Congressman SMITH. Perhaps those advocating the Dog Creek Reservoir would be glad to furnish this information.

Mr. SWENDSEN. I never heard of the advocacy of the Dog Creek Reservoir before.

The CHAIRMAN. Of course, the committee understands that you can not go into detail as to the cost, but it does seem to me that you can make an estimate of the material and after a survey you would have an idea of the cost, an idea so that you would know it would equal that much or more. I think that it would be the endeavor of the committee to have the best site obtainable, and, of course, we would satisfy ourselves that it was the best site.

Mr. GREGG. I want to find out about how much of an area there is which drains down here from Lake Henry on the west and the Teton Mountains on the east.

Mr. SWENDSEN. None of the south fork.

Mr. GREGG. I said this side of the Tetons in that area there is from 500 to 1,000 square miles, and in this there is one reservoir now in Lake Henry of a hundred thousand storage feet.

Mr. SWENDSEN. That is too large, entirely too much, 62,000 feet is the total capacity, this is limited because the run-off is wholly inadequate. For an example, this year the water was a little over twenty or thirty thousand feet.

Mr. GREGG. And in this five hundred or a thousand square miles there is one reservoir of approximately fifty to seventy-five thousand cubic feet capacity, and there is no other reservoir in that area.

Mr. SWENDSEN. We have been searching for a reservoir site for upwards of 20 years—that is, the various farmers around this country have—and so far have not succeeded in finding any.

Mr. GREGG. In addition to Dog Creek and Winegar Hole, I would like to offer the names of three locations, placing no responsibility at all in the matter, as they have been mentioned as available sites. They are the Teton Narrows, Coyote Meadows, and Lake of the Woods. It is passing strange to a man who has roamed all these mountains that in these five hundred to a thousand square miles there should be only this one available site.

Mr. SWENDSEN. With respect to the Lake of the Woods, I might say that that site has been surveyed under my supervision and that it is impossible. The Teton Narrows have been investigated with a like result. The Coyote Meadows I do not know by that name, if we can get its location we can then look it up.

Senator GOODING. I would like to ask Mr. Gregg if he would show the Dog Creek Reservoir site and point out these other sites that he knows of.

Mr. GREGG. I am perfectly willing to leave that to an investigation, and to leave it to a final decision, I am merely giving this preliminary information.

Mr. SWENDSEN. I find that the Henry's Lake Reservoir was constructed to serve a part of the area in the Fremont-Madison Reservoir district. When this company was organized in 1918 its intention was to supply water for 200,000 acres, subsequently the owners of 30,000 acres got together and built this Henry's Lake Reservoir, so that 170,000 acres is the land now in question. The Henry's Lake Reser-



voir can not be expanded, as it is doing its maximum duty at the present time.

Senator KENDRICK. I think the people ought to understand that in case the palm is put in operation and there is a demand or a requirement to maintain the water at a certain level, I think this should be required.

Mr. SWENDSEN. Our plans contemplate leaving the outlet to this lake or reservoir so that it would be impossible to draw this water out at any time. I also indicated that it can not be determined until our plans would be presented to your State, because this reservoir would be located in Wyoming.

Senator KENDRICK. I had no further thought on that point except that in service to the people here they ought to have that thought fixed in their minds now.

Mr. SWENDSEN. I am sure that they have that in mind, Senator Kendrick. I think that there is not a sportsman's association in this section of the country that has not taken a part in this matter and is vitally interested in it.

Senator GOODING. There would be no trouble in getting together on this matter I am sure.

Mr. SWENDSEN. The bottom storage of the reservoir is not so great anyway; the capacity is obtained near the top where the area is larger. I think that is all I have to suggest unless there are some questions that I may be able to answer.

The CHAIRMAN. Thank you, Mr. Swendsen.

#### STATEMENT OF D. P. MURPHY, DUBOIS, IDAHO

The CHAIRMAN. You may state your name and your occupation for the record, Mr. Murphy.

Mr. MURPHY. D. P. Murphy, Dubois, Idaho, representing the Dubois project. I will go ahead and make my statement. I want to call your attention to the Reclamation Service report for 1903, 1904, and 1905, in which the water of what is termed the "Bechler Basin" and all the tributary waters of Fall River were assigned to the Dubois project, which is located about 50 miles to the west. On the basis of that assignment, the Land Office made certain withdrawals of our land and also made decisions cutting down the entries from 320 to 160 acre homesteads. The situation is an individual one, in that water is located in the national park and the waters are not available for filing. The only gesture made by the Government was to our project.

Congressman WINTER. You mean that there was some commitment on the part of the Government?

Mr. MURPHY. We think so in their decision to reduce the size of the homestead entry from 320 to 160 acres on all this area included in our project. We do not believe we have to strike an attitude in an attempt to change the boundary; we are looking to the Government to deliver to our settlers.

Mr. SWENDSEN. This water was filed on in 1919.

Mr. MURPHY. I understand in a general way, but I still observe that you have not the water, and I still insist that the Government retains the same attitude that they did before they made the assignment.

We are not here to hinder the people of this vicinity. We are anxious to have this matter entered on the records, because if the committee recommends a change in the park boundary that simply throws the water open, and in our opinion it would constitute a forsaking of our settlers by the Government.

Congressman SINNOTT. Where is the point of diversion on your project?

Mr. MURPHY. Three miles above the site. The proposal was to gather the water from a great many sources. All of the sites were surveyed, which also included the site at Island Park and Henry's Lake.

Congressman WINTER. If this project is undertaken it may jeopardize your water rights.

Mr. MURPHY. We have the Government decision, based on the decision they made when they cut our settlers down on a basis of these waters. They said you shall have 160 acres instead of 320 acres here; these Bechler River waters are yours.

Mr. JACKSON. May I ask Mr. Murphy to point out to this committee where that appears in any record?

Mr. MURPHY. What do you mean, Mr. Jackson?

Mr. JACKSON. You say that you were cut down to 160 acres because of these waters.

Mr. MURPHY. In the Land Office decision and the decision made at the time of the filing.

Mr. JACKSON. May I suggest to you that these reductions in the amount of land were made at a time when you were undertaking to get the Government to impound water in the Island Park country.

Mr. MURPHY. They were made on the basis of the two reports and in the decisions I referred to.

Congressman WINTER. If the matter of water rights is within the jurisdiction of the State and not in the Government, what would become of your contentions if the water rights are entirely within the power of the State. Your rights would have to come from the State of Wyoming would they not, Mr. Murphy?

Mr. MURPHY. If it were taken out of the jurisdiction of the Government; but we take the position on this particular situation that nobody could negotiate since they were within the national park boundaries, and we want to maintain that position. It makes a difference to us if our water rights are to be taken by a different process; that is, if our water rights are all to be taken, then further abandonment of our land must follow. So, just as the Government cut our settlers down from 320 to 160 acres and opened up these waters, we want the waters recognized as part of our assets. If you change the boundaries of the park then it serves to throw the waters open to anybody's entry.

Congressman SMITH. Then, Mr. Murphy, you do not object to the elimination of the southwest portion of the Yellowstone Park; what you want to do is to file your objection on us to the use of the water by others and have the record show you made claim on the water?

Mr. MURPHY. I can not commit all of our people to any change in the park boundary; I do not make any provisions at all, but we want you to understand that we do not want to hinder these people in any way. I am quite sure that the Government can make provisions for the replacing of these assets to us.



Congressman WINTER. As a matter of fact, would it not require a tunnel to get this water?

Mr. MURPHY. No; there is not a hill over here which might not be traversed in this way.

Congressman WINTER. There are difficulties, and your idea is that there might be a way to get your benefit, Mr. Murphy?

Mr. MURPHY. Yes; that our project may be safe by some provision. I might say that over in our country we have a very sympathetic attitude toward the farmers of this country, and I make the statement that we are in favor of the park change.

#### STATEMENT OF JOHN W. HART, RIGBY, IDAHO

The CHAIRMAN. You may state your name and address and whom you represent for the record, Mr. Hart.

Mr. HART. John W. Hart, Rigby, Idaho. I am here representing a committee of nine men, who are representing the canal companies located in irrigation district No. 36, for the purpose of the distribution of water and the settling of difficulties which might arise from the distribution of water, and also for getting the best use of the water.

The CHAIRMAN. What land does that embrace, Mr. Hart?

Mr. HART. From the Montana line to Twin Falls on the Snake River and its tributaries.

Mr. SWENDSEN. You have heard some suggestion about the more economic use of the waters that might be had in this territory; that there has perhaps been a waste of water in this territory. What would you say as to the economic use during the years of 1919, 1924, and 1925; is it your opinion that the best use of the water has been had and no waste suffered?

Mr. HART. That is the fact that was the purpose of the committee of which I am a member. We were selected by unanimous decision; we have no legal standing, but we are to act in the capacity of a helper, so as to help make the water serve its best duty.

Mr. SWENDSEN. You go to the district frequently, Mr. Hart?

Mr. HART. Yes, I do.

Mr. SWENDSEN. During these trips over the district, Mr. Hart, have you ever noticed, or had it called to your attention, or seen any waste of water during the dry years?

Mr. HART. None whatever.

Mr. SWENDSEN. What, Mr. Hart, could you say with respect to the general advantage that would accrue to this country if this reservoir was constructed; could you compare it with the advantages that Jackson Lake gives to the lower country?

Mr. HART. That is a very great benefit, as our experience on the other side of the South Fork shows. When we anticipate a short water year we send a notice to the farmers that the conditions justify us in looking forward to a shortage. We urge the farmers to get the water in the canal in the spring so that the land may be thoroughly irrigated, and later it would take less water. We have been able to save a great many people from utter ruin by arranging an exchange with the reclamation department—which has something to do with the Jackson Lake Reservoir, which serves the farmers of the lower country at different places along the river—so that when they get

prepared to water, by getting it on early in the spring and then when they want to take it off for four or five days, giving the water master notice to store that in the lake, the water master will at their request turn it down to them. By operating along these lines, we have been able to save this year and also in the years of 1919 and 1924 hundreds of dollars; yes, hundreds of thousands of dollars worth of crops that would have been wasted and lost to the farmers. These people up here have come to us for suggestions in regard to this exchange, but they have been handicapped by reason of the fact that they had no storage, and they must let it go by and not have it for use later; they do not have this advantage. This has worked out splendidly for our people, and we expect that our farmers will now avail themselves of more storage. Since the American Falls project is being constructed, they can buy storage in the Jackson Lake now or when this project is completed. I might say that this Jackson Lake impounds water for practically the whole valley for some distance along the South Fork to Jerome, Idaho.

Heretofore, the people who thought they had plenty of water expanded their holdings and paid no particular attention until they found out the fact that these extremely dry years came and they were short of water. They were handicapped greatly and it was necessary for them to procure storage to supplement the natural flow which they had. Some time ago the canal companies acquired storage in the Jackson Lake Reservoir, in order that when the dry season came they might have this storage right to supplement the natural flow which was lacking.

Senator GOODING. You are a pioneer in this country are you not, Mr. Hart?

Mr. HART. Yes.

Senator GOODING. And you are familiar with the dry years that frequently occur in this country?

Mr. HART. Yes; I am.

Senator GOODING. And it is true, is it not, that not only the quantity is impaired, but also the quality of the crop they raise is impaired by the dry years?

Mr. HART. Yes; that is true.

Senator GOODING. And that is equally true of all crops?

Mr. HART. Yes.

Mr. GREGG. Do you not think that if this reservoir was put in the Bechler Meadows that the water should be taken down without leaving such a ghastly blackened mud bed as we now see at the Jackson Lake?

Mr. SWENDSEN. I think, Mr. Gregg, that these people here are just as greatly interested and just as desirous that the beauty of the park be maintained as anyone, and I do not think that we need worry or object that they will in any way desecrate the beauties of the national park. You will find that they are, indeed, very proud of that playground, Mr. Gregg.

Senator KENDRICK. I want to say in cooperation with Mr. Gregg, and also in support of the statement of Mr. Gregg, that there is every reason in the world that this question should be considered in connection with this matter. It was not considered at the time of building the Jackson Lake Dam, and has entirely destroyed what was once a most beautiful lake.



Mr. SWENDSEN. But, Senator, it has reclaimed thousands of acres of fertile land.

Senator KENDRICK. But that had to be learned by experience, and there should now be no question in the minds of the people about the proper course to pursue in order to protect the natural beauty.

Mr. SWENDSEN. I think that is very proper. And I also think that every effort should be made and I am sure that these people here are very desirous of making it beautiful.

Senator KENDRICK. But unless the proper precautions are taken this would and will happen. It is a matter of duty to protect against what we have now in Jacksons Lake.

Mr. SWENDSEN. But may I suggest to you, Senator Kendrick, that that project was built by the Federal Government?

Senator KENDRICK. That is quite beside the question; we are not interested in that now.

Senator GOODING. I think we all agree with Senator Kendrick; there is not any doubt about that.

Senator KENDRICK. I have been made weary many times by my own failure to observe the rules, and by testifying myself, but I want to say that in so far as it is humanly possible we ought to do what we can to protect these natural beauty spots which we have. Although we may not agree with Mr. Gregg, he is here upholding and defending a principle. He is thoroughly enthusiastic in the matter. He may not recognize the economic side as some of the others of us do, but we all have rights, and he is endeavoring to do the right thing. We ought not to overlook the fact that, if this reservoir is set aside and dedicated to the service of reclaiming these lands in Idaho, it is coming to you for a minimum of cost. It will be really delivered to you without money or price, and you ought to be willing to do everything you can to safeguard the public beauty spots such as this one is. Everything that is possible should be done. There should be a roadway built around the reservoir, and a roadway over the dam. There should be enough water left at all times to bring it to the edge at a high level; enough so that when people want to fish they could do so in order that they might enjoy the lake in all respects. These are practical suggestions that I make in this matter.

Congressman SMITH. Is it not quite likely that the State of Wyoming would insist upon these things, Senator Kendrick?

Senator KENDRICK. It is to be hoped that my State will not be lacking in diligence again.

Mr. HART. May I suggest that I talked with several people yesterday while on our trip and they all expressed to me that they would be willing to clear out these few clumps of trees, or whatever there is. They want to take all of the unsightly things out, but they want to protect the beauty of the scenery and get the water, so that I do not think you will find any difficulty in getting an agreement that will serve everybody along this line and one that will be reasonable.

Governor MOORE. I would like to pledge the cooperation and assistance of every citizen in Idaho, and to say that the Government need have no fear but that everyone will give their honest endeavor and support to this matter. They will do all they can to help carry out the wishes in the matter of the construction of this project as far as possible.





SUBCOMMITTEE OF COMMITTEE ON PUBLIC LANDS AND SURVEYS,  
UNITED STATES SENATE, CROSSING BECHLER MEADOWS, YELLOWSTONE  
NATIONAL PARK



SUBCOMMITTEE OF COMMITTEE ON PUBLIC LANDS AND SURVEYS, UNITED  
STATES SENATE, IN BECHLER BASIN, SOUTHWEST CORNER OF YELLOW-  
STONE NATIONAL PARK





BECHLER RIVER AND PORTION OF MEADOWS

Senator KENDRICK. I want to say to this audience and to this committee that this was a difficult task for me yesterday; it was a picnic excursion compared to what I am used to doing at home.

I view these Bechler Meadows in a different light than some people do. I view them as a vast beautiful meadow, a beautiful place to camp, and I deplore the necessity of eliminating it from the park, but we are no less concerned with the people of Idaho than we are with the people of Wyoming, or we are not less concerned than if they were the people of Wyoming, and we are attempting to do the right thing here. I want to be on record in this matter. I believe that if it be found necessary to eliminate this territory from the park it will be done, whether it is a pleasant task or not, and if necessary to add other lands to the park in lieu of it so that these lands may serve a useful and economic need.

Congressman WINTER. The people of Wyoming have contributed 300,000 acres to the park now.

Senator KENDRICK. I might say, Mr. Winter, that we are not contributing that as a part of the Yellowstone Park. If that becomes a national park it is going to be called the Grand Teton National Park.

Congressman SMITH. I wish to state that the State of Idaho is setting aside as a game preserve many times as much land as it is asking to be taken out of the park.

Mr. GREGG. But this was rejected by Mr. Albright for the purpose for which it was given.

Mr. HART. All of the people here are honest and conscientious in the thought that this will do more good as a storage reservoir for water, and that they will be more satisfied and contented to proceed to operate their farms with a more certain feeling that they can now go ahead and operate them without the feeling that there will be any lack of water. We believe that this will be a very good thing for the bringing about of a much better condition in this upper Snake River Valley.

#### STATEMENT OF GEORGE HARRIGFELD, ASHTON, IDAHO

The CHAIRMAN. You may state your name and whom you represent, Mr. Harrigfeld, for the record.

Mr. HARRIGFELD. My name is George Harrigfeld; I live at Ashton, Idaho. I am a stockholder and director of the Marysville Irrigation Co. and also a stockholder in the Farmers Own Ditch Co., and also in the Harrigfeld Canal Co.

Senator GOODING. Can you tell us, Mr. Harrigfeld, when these canals were located; that is, approximately?

Mr. HARRIGFELD. I can; the Marysville was started in 1887, the Farmers' Own in 1896, and the Harrigfeldt in 1900. I might go into a general statement. One of the settlers of this section, Senator Dubois, in his statement to the House Committee on the Public Lands during its hearing held at Washington, of which we have a report, stated that he arrived at the little village of Blackfoot in 1880, that he was a pioneer of this section of the State, and that the people built their own canals and that they prepared the water rights. Now, I want to say that the year 1880 is a very early period for this end of the State. In fact, the settlement of eastern Idaho



proceeded from the lower section, the people coming in their turn to the upper end of this valley. The first settlers arriving made the first filing on the water, and therefore they held the first water right. The later settlers that settled up in this country settled right where the water originates, and they did and now hold the youngest water right. We have heard a whole lot here this morning about the shortage of water. You take the conditions of 25 years ago, or even 15 years ago; the condition of a water shortage was not apparent at that time for the reason that when the settlers came up into this section, or rather came into this State, they made a filing on water. They would appropriate sufficient water for the entire tract that they covered, and not what they could cultivate; later they would have only a small part in cultivation. For instance, if a man had filed on 160 acres he naturally wanted to appropriate a water right to cover the 160 acres, although when he started in he was only able to put a very small part—probably 10 or 15, or possibly 20 acres—into cultivation, therefore he only needed enough water for that much land, but he filed on the 160 acres of water.

When the later settlers came, a close measurement had never been had on this water and we figured that there was a sufficient amount of water for all of us. As the years went by and as more land was brought into cultivation there was a very apparent shortage of water. And during the World War they said cultivate more acreage, raise more grain, do more farming, and it was then that we realized that there was not sufficient water. When these dry years first occurred, and they did occur, there was still sufficient water in the rivers to satisfy us for the needs of the limited amount of land that we had in cultivation. During the years of the war, when we brought every available acre we could into cultivation and we wanted water to irrigate all of these tracts, we discovered there was not sufficient water; 1919 was a very unfortunate year; it was the first time that we really felt the extreme shortage of water, and it was the worst in our experience; 1924 was similar and 1926 is not very far better.

Mr. Baldwin stated that he had a statement this morning, which he presented to you, showing the condition of the actual shortage of water for a number of years from 1918 on. To show you more fully the condition that existed here in 1919, I will read a portion of a statement I made during that year, which was used by Mr. Smith in the hearing before the House Committee on the Public Lands at Washington, and also before the Senate Committee on Public Lands and Surveys. In part it is as follows:

I am a farmer, farming 640 acres just south of Ashton, Idaho; 300 acres were planted to wheat, which, with water sufficient to irrigate, would have produced 12,000 bushels of wheat, but which actually produced only 1,250 bushels. I had 20 acres of barley which yielded 28 bushels, and 32 acres of alfalfa, the hay on which should have amounted to not less than 160 tons and which only produced 30 tons of very poor hay.

The year 1919 should have been a record-breaking year for the farmers.

The above estimate of yields is based on what 20 years of actual experience has developed, and is a result of a crop failure by reason of not having sufficient water.

To reasonably safeguard the farming it is absolutely necessary to have a storage reservoir, and this is the only location that is left. This report shows you a real bad year of loss.

Mr. Gregg has asked the question about the gap between 1919 and 1924; in other words, he assumes that because the years 1920, 1921, 1922, and 1923 are not mentioned that they were profitable crop years. So far as the raising of crops, when you take the later water rights, they were able to raise crops all right for these years, but whether they were profitable to the farmers from price, etc., does not enter into this controversy. Of course, with the people who have the younger right it is simply a question of how dry are we going to be this year. We are dry to some extent every year, of course, and we need additional water.

I am interested in one of the oldest canals in this upper country and I am also interested in one of the youngest; therefore, I know the difference that even a few months in the date of a water right makes, and I know what it means in having water at the time it is needed.

The water right of the Marysville Co. dates from October, 1895, but it should have dated from 1887; through an oversight of the early settlers they lost eight years which can not be regained. The Independent Canal has a water right that dates, if I remember correctly, in June of 1895, only a few months earlier than the right of the Marysville Co., still the Independent Canal may have water for weeks when the Marysville Canal is dry. The Yellowstone and the Harrigfeld are about a year younger; they may be shut down weeks ahead; therefore, we people up there realize the importance of a few months or a year or two years in the difference of the dates of water rights.

I think Mr. Gregg made the statement up there yesterday that the farmers had settled on this land and had figured that there was sufficient water to do them. Even if there was not he should have known that. We did not have a stenographer there to take down his words, but what he meant to say was that the farmers had made a bad business investment and must now take the consequences; that if he made a mistake in his business he would have to take the consequence. Now, gentlemen, we have been taking the consequences of our mistake for a good many years. What he should say was that we should all declare ourselves bankrupt and move out of the country, but if mistakes have been made, and they have, we are now trying to correct them and we have been spending a good deal of time and money in trying to solve this question. If Mr. Gregg can not agree with us we feel sorry for him.

Mr. GREGG. What I said yesterday was that I thought that if we made a mistake or a misbusiness calculation we should not ask the other man to correct it. Now, if you do not do that out here in Idaho, I am going to move to Idaho.

Mr. HARRIGFELD. These early settlers did make mistakes but they had no reason at that time to think that they would not always have plenty of water, and now they are trying to correct the mistakes they have made. It is just simply a question of how much water each and every one of these canals that are interested in the Fremont-Madison Reservoir are short each year, and I can say that each year there is some shortage that can be remedied by this storage.

Mr. Austin was asked the question this morning as to what caused the decrease in the acreage of sugar beets. Mr. Austin can tell you that I was one of the heaviest growers of sugar beets in this section.



I have stopped raising them now, and I stopped before the price of sugar beets ever went up. I realized that the demand of the older right was so that they were demanding all the water. I never did get the high price for sugar beets and the reason I stopped growing them was because of the shortage of water. I want to say here that if we want to eliminate the weeds on our farms we must raise sugar beets. I can remember when they were considered one of the main crops in this upper country and to-day there is not one grower of sugar beets in the upper section, simply because it is so uncertain whether there is any water when it is needed.

I had the pleasure of riding with Senator Stanfield, the chairman of the committee, yesterday and he asked me the question. "There does not seem to be much stock in this section." Now, then, the reason for this is that we can not winter stock on dry straw. Each and every year the upper section has to import hay for the reason that the water is so uncertain in this upper country.

Congressman SMITH. Is that the reason the dairy industry does not flourish up here Mr. Harrigfeld?

Mr. HARRIGFELD. Yes; that is the reason.

Senator GOODING. All you are asking, Mr. Harrigfeld, as I understand it, is the use of this water when it is stored to supplement the water rights you already have in this section?

Mr. HARRIGFELD. What we are actually doing is trying to get this water and have it so that it can be stored, and we might raise a full crop by bunching all the water. At the present time we are only able to raise a part of a crop.

The question has been raised here as to another site. I might say that the Harrigfeld, the Yellowstone, and the Highland Ranch, and the other canals have been trying to establish sites for reservoirs for a number of years. All this upper section has been employing engineers for several years trying to locate sites to store water, but so far we have not found anything that will relieve the situation.

I realize that you gentlemen are here for a very limited time, and there is a lot that could be said from the standpoint of the farmers, but I want to give the other gentlemen an opportunity to make a statement to you.

Congressman SMITH. What percentage of these farms are mortgaged, Mr. Harrigfeld?

Mr. HARRIGFELD. Probably 97 per cent.

Congressman SINNOTT. And what rate of interest do they have to pay?

Mr. HARRIGFELD. Eight to ten per cent.

Mr. GREGG. Does not the Federal farm loan get up here?

Congressman SMITH. The Federal farm loan bank will not loan money on land where the water is not sufficient to produce a crop thereon every year.

Mr. HARRIGFELD. We are mortgaged to mortgage companies up here in this section that charge from 8 to 10 per cent.

Senator GOODING. Do you know about the foreclosures, Mr. Harrigfeld?

Mr. HARRIGFELD. Yes, I do. If you will look at our local newspapers there is column after column of advertising of foreclosures, and the mortgage companies are advertising that they have these farms for rent.

Mr. GREGG. I have here a memorandum of the value of the farm land in this vicinity—that is, of good dry land—and I want to say that that average is \$40 an acre, and on good irrigated land from \$100 to \$150 an acre.

Congressman SMITH. The probabilities are that these farms are all mortgaged for as much as they are worth.

Mr. GREGG. What I want to get at is the facts in regard to these matters.

Senator GOODING. I know that is what you want, Mr. Gregg; I know that you want the facts. Now, Mr. Harrigfeld here can probably tell us.

Mr. HARRIGFELD. I want to say that the dry farm lands in this section—that is, the value of dry farm lands—will begin with about \$10 an acre and maybe run as high as \$40. In a year like this year it would be very questionable whether you could get a bid of any kind on any dry farm land.

Mr. GREGG. Do you mean the dry farm land we went through or over yesterday?

Mr. HARRIGFELD. You have not seen any dry farm land, Mr. Gregg.

Congressman SINNOTT. We had some land pointed out to us where they said they had summer-fallowed and where they raised 30 to 40 bushels.

Mr. HARRIGFELD. That is where the snow falls deep and good conditions prevail. This is especially true with winter wheat; the reason for this is that when a dry year comes on, that crop is usually made. For instance, my brother said this spring that they had the fall wheat in, and he figured that this upper section would yield 50 bushels to the acre, and if they now get on an average of 20 bushels they will do well. This is because at the time they needed the moisture they did not get it.

Congressman SINNOTT. And they have been two years then raising this 20 bushels to the acre; is that right?

Mr. HARRIGFELD. Yes; that is right. In a dry year our expenses are just as great as in a year when we have the best supply of water that we have ever had.

Senator ASHURST. And we also passed by some dry farms where the yield they said was 10 and 12 bushels to the acre.

Mr. HARRIGFELD. That is the usual dry farm.

Senator ASHURST. And what is that worth?

Mr. HARRIGFELD. Some of it is worth \$10 and some \$20 an acre. I have not been over it for a number of years, but there was some sandy land up through there and the value would be very low. Then we have dry farm lands that have very deep soil. They retain the moisture better and the value might run up to \$40 an acre.

The CHAIRMAN. If the land here, Mr. Harrigfeld, was worth \$50 with the present water right, what would be the increase with a sufficient water right?

Mr. HARRIGFELD. Possibly \$75.

The CHAIRMAN. And if it was worth \$100 now with its present water right, what would it be worth with an adequate supply of water?

Mr. HARRIGFELD. It would be worth about \$150.



The CHAIRMAN. Then the difference would be between \$100 and \$150. The impression has grown upon me during this hearing that you have a great body of land here for which you desire a supplemental water supply. You probably now have a 75 or 80 per cent water right, if that were increased to a 100 per cent supply what increase would that be in the value of the land?

Mr. HARRIGFELD. The date of the water right makes a difference. I might say that we have water rights of 25 to 75 per cent, and if we could get a 100 per cent water right the value would be increased to the maximum value.

The CHAIRMAN. You have about 170,000 acres that would come under this reservoir, how much would that be increased per acre by the application of this water supply?

Mr. HARRIGFELD. From 60 to 65 per cent.

The CHAIRMAN. From 60 to 65 per cent?

Mr. HARRIGFELD. Yes.

The CHAIRMAN. And some of them I understand are close to a perfect water right now, so that those with a small water right would enjoy the greater increase.

Mr. HARRIGFELD. Yes, that is right.

Senator GOODING. I notice that these farmers who have a 100 per cent water right have comfortable homes with trees around them. Some of them are really beautiful, and then some of the others are what we might call shocking. I think these homes with the beautiful trees and the beautiful surroundings are the best evidence of a full water right, are they not?

Mr. HARRIGFELD. Yes.

Senator GOODING. I noticed that the roads are better, the homes are better and the schools are better, where there is 100 per cent water right.

Mr. HARRIGFELD. Well some of these other people have no water and they can not do a thing.

Senator GOODING. So that you would say a 100 per cent water right would go to make a more beautiful country, better homes and probably better citizens?

Mr. HARRIGFELD. Yes, I would say so. There is one point I want to mention; that is, that Mr. Gregg said Mr. Albright had said that the tract of land along the west boundary of the park was without value. It is very easy for Mr. Albright to make that statement at Washington, but Mr. Albright can not come amongst the people here and say that that strip of land has no value because we out here know it has value. We know the amount of game that is in the Bechler Meadows, where there is 8 or 10 feet of snow, and that game has to come down and they are hunted and driven back in the deep snow. Now, if you put that strip into a game preserve you have done the best thing you can do to preserve the game that we have left in this section of the country or in the Yellowstone Park.

Senator KENDRICK. It might be a very desirable country—that is, a desirable strip to use as a game sanctuary and as a part of the country to be included in the park for that purpose—but yet not particularly desirable for park purposes. You will understand that the plans for changing the boundaries of the park is a move in the direction of taking in desirable places for recreational purposes and eliminating those that are not used for that purpose, so that the

changes are a part of a plan to modify the outlines so as to meet the recreational needs of the demand. So, I can say this, that the territory is no doubt a good game sanctuary, but not necessarily desirable to be included in the National Park.

Mr. HARRIGFELD. Exactly, and it is a strip of country where the killing of game is going on more than any other place in this section of the West.

Senator KENDRICK. And no doubt should be set aside.

Mr. HARRIGFELD. Yes. If the citizens of Idaho and Wyoming would cooperate with their officials, who are in charge, something could be accomplished, I think a few game wardens could do very little to protect them.

Senator KENDRICK. You will note that I made a distinction between the territory for park purposes and that for use as a game sanctuary.

Mr. HARRINGFELD. I want to say that the park is part of our country. We want to see it protected and we want to see our game protected as well. The statement has been made that there are probably 20,000 elk in this territory, and Mr. Albright said that there are probably 600 moose. We are willing to cooperate in protecting these animals, and at the same time when we help to protect this game we are of the opinion that we are entitled to a little protection ourselves.

Mr. GREGG. If I submit a telegram now, I think it will about close our case, gentlemen. It was sent to me by Chairman George Bird Grinnell of the Council on National Park Affairs and Wild Life Association—that is the association I represent—and reads as follows:

Please protest before Senate committee against project to build irrigation reservoir in southwest corner of Yellowstone Park or cutting off part of park for that purpose. Council on National Park and Wild Life regards it as against public interest.

Senator ASHURST. Where does he live, Mr. Gregg?

Mr. GREGG. He is the president of the Boone and Crockett Club, and also president of the National Park Association. He is a great game protectionist of great experience, and really acknowledged as a wonderful man.

Mr. JACKSON. Has he ever been in this western country, Mr. Gregg?

Mr. GREGG. Not only has he been here but he speaks the Indian language.

Mr. MILLER. It is the purpose of this association, Mr. Gregg, to protect the game and also protect the scenic beauty of this country?

Senator KENDRICK. I want to say a word in favor of Mr. George Bird Grinnell. He is, as was stated by Mr. Gregg, a wonderful man. He has the respect of untold thousands of people; he has rendered services throughout the West; he is a public spirited man; a writer of a number of books; and he is, as has been suggested, an enthusiastic protector of wild game. I want to call your attention to this fact, and that is not to disregard the opinion of these people. Their opinion is entitled to our consideration; they are not engaged in a pleasant duty in protesting against this local attempt; they are not only moved by this opinion but they are instilled with the spirit of the thing. We will not disregard their views. It is a question of



showing them the need, as has been stated here by these splendid folks; the needs of these 20,000 people should be weighed in the balance. Mr. Gregg should also have the same opportunity to express his views.

Congressman WINTER. What Senator Kendrick has said is perfectly true. It is proper and it is the proper rule of evidence; it is proper to ask what the opinion of everyone is; therefore I think that we should all have an opportunity to express our views on this matter.

Senator KENDRICK. I do not wish to find fault with anybody here; this congregation of high-class American citizens all represent a great country.

Senator GOODING. I am sure that we are going to be able to work this matter out. I agree that the thought expressed here by both the Senator (Mr. Kendrick) and Representative (Mr. Winter) from Wyoming is absolutely right. We are going to solve these problems because we are right, and I do not think that Mr. Gregg is going to put up against Mr. Harrigfeld the cause of the wild life against the need of these 30,000 people. I am very delighted with the way the whole thing is being presented and with the way in which the questions are being discussed.

The CHAIRMAN. This committee is conversant with the questions of the two States, I am quite sure.

Congressman SINNOTT. As I recall that telegram, Mr. Gregg, it is a request to you by some council?

Mr. GREGG. Yes; it is.

Congressman SINNOTT. And what is the council, please?

Mr. GREGG. The Council on National Park Affairs and Wild Life. Mr. George Bird Grinnell is president.

Congressman SMITH. Has he ever been in the Bechler country, Mr. Gregg?

Mr. GREGG. He told me that it was before the park was created; that he had gone through some of these trails.

Congressman SMITH. And do you think that he would still be of the same opinion if he went through and saw what we saw yesterday?

Mr. GREGG. Will you allow me to say right here, gentlemen, that as far as I am concerned I do not think that there has been an improper question asked me during this hearing. I have been a farmer myself, although I am an export manufacturer now, and I have a great deal of sympathy for these people. But there is a question of the balance of the interest of the people of the United States connected with this matter. I come from a State which has as many inhabitants as the three States bordering the park.

Senator GOODING. At the time Idaho was given statehood there was something like 84,000 square miles of territory. Since that day there has been taken away from Idaho in national forest reserves 23,000,000 acres of land representing 37½ per cent of the territory of the whole State. Outside of the valleys we have seen, that is, those that are more beautiful than anything we saw yesterday this 5,500 acres we are going to use as a reservoir is only as a pin head compared to that. We have more territory here in forest reserves than the entire States of Massachusetts, Vermont, and Delaware, and this is only in Idaho; and you go to California they have as much, Oregon as much, Washington as much, Wyoming as much, and as far as people are concerned we have room here for millions of people, but



we can not live on scenery alone. It is coming to a time when the West will have to feed the great American people, and the only reason we are here to-day is because Idaho must have this water to bring about a greater development to help feed the American people.

Mr. JACKSON. I wish to impress upon you the attitude of the people of Fremont County toward this Yellowstone National Park. These parks are playgrounds and are of very little use unless they are made attractive. This we have realized and therefore have made the most of this playground. We have realized the fact that Mr. Gregg, together with all the other people, could not have made use of, or have been able to visit these parks unless the highways were made in order that the park might be accessible.

It has already been suggested to you the number of acres of land that have been taken away from the people of Idaho after the State was created. Now permit me to call your attention to the fact that 50 miles of highways of Fremont County is over land of this character. Yet, Fremont County, realizing that she had a duty to perform towards the people who desire to visit that park, spent \$1,000,000 to make the road through that county. I do not know the exact amount, but I know of \$80,000 spent on a road through the Targee National Forest alone. This is through the forest which pays nothing back except to provide a place for the highway.

The people of Fremont County felt that they owed this duty toward these parks, and, of course, the benefit is not one-sided entirely. We paid the expense of the first survey for a road through Fremont County, which was for the purpose of locating the first highway. We built the first trail through that country that was passable for an automobile, and we did it without any assistance from the Government. The highway from the Fremont County line on the south to Ashton on the north was originally a State and county proposition. We of this county paid two-thirds of the consideration of that highway and the State the other third. This road was not of such a character that the Government would contribute. The Forest Service is now contributing largely to the roads through the forest. Fremont County now has over \$100,000 in the road through the forest to get to Yellowstone National Park.

Mr. MILLER. You were a member of the board of county commissioners of this county, I believe, Mr. Jackson?

Mr. JACKSON. Yes; I was. I know that we have spent more than a million dollars in this respect alone. I thought that this explanation was due the people of this county in order that you gentlemen may know their attitude.

#### STATEMENT OF L. ERIC JOHNSON

The CHAIRMAN. You may state your name and business, or who you represent, for the record, Mr. Johnson.

Mr. JOHNSON. My name is L. Eric Johnson. I am a farmer, and am representing myself at this time. In 1915 my brothers and I paid \$16,800 for a place containing 160 acres. A little after that time we separated our partnership, one brother withdrawing, while my other brother and I paid off \$9,600 on the original cost. A few days ago we handed that place over to the mortgage company, the Federal Land Bank of Spokane, with a mortgage of \$7,600. Although



we owed only \$7,200, there was \$400 that we never got. In 1918 we bought another place of 121 acres for \$21,200. After paying \$12,000 on the original cost, we lost it after the first of this year through a mortgage of \$9,200, which we handed over to the Beneficial Life Insurance Co. In 1919, on these two places, figuring at normal prices, we lost \$1,080 in hay, \$2,700 in wheat, \$3,500 in peas, or a total of \$7,280. Of course, at that time prices were much higher so that we actually lost about \$14,560——

Congressman SINNOTT (interposing). Was that due to a water shortage, Mr. Johnson?

Mr. JOHNSON. Entirely to water shortage; I think in 1919 the canal was shut off about the 2d of June. In figuring these crop losses, I have not taken into consideration the planting of beets or potatoes, which would have been greater than the hay, wheat, and peas. We did not try to plant beets because the water right was not old enough; part of it was covered by a decree of 1884, and part of it by a decree of 1902.

Congressman SMITH. If you had had a water right of 100 per cent, Mr. Johnson, you would probably not have lost the farm?

Mr. JOHNSON. I am sure we would not.

Congressman SMITH. And your reverses are entirely due to water shortages, are they?

Mr. JOHNSON. Yes; entirely to water shortage.

Congressman SMITH. And that situation is typical of hundreds of others, is it not, Mr. Johnson?

Mr. JOHNSON. Yes; I would say hundreds. My neighbors in that section along the canal have their farms mortgaged so that they have lost them.

#### STATEMENT OF GEORGE E. PINCOCK, SUGAR CITY, IDAHO

The CHAIRMAN. You may state your name, your occupation, and whom you represent, Mr. Pincock.

Mr. PINCOCK. George E. Pincock; I am a farmer and I live at Sugar City.

I have been engaged in farming in this country for 39 years. I have been very much interested in the testimony that has been given by the farmers. Before I proceed with my statement I will say now that for the last six years I have been in hopes that this day would come to the settlers of the Upper Snake River Valley. I shall not be able to fully express my appreciation, as a pioneer and a farmer, for this visit that this committee has made and for so patiently listening to the story of the farmers, the engineers, and all others who have provided testimony for this hearing; it is beyond my power of expression to tell you how much I appreciate this. I have been with the committee during the entire time of their visit. I was with them yesterday, and I have listened to all that has been said to-day, and I agree particularly with the preservation of the national parks. I have listened to the Senator from Wyoming (Mr. Kendrick), and I have enjoyed very much the interest he has shown in both the farmers and the farms, and also Yellowstone National Park, the playground of this part of the country. I wish to state that I have planted a crop every year for 39 years and my experience is exactly as stated by my friend Mr. Harrigfeld, and that is that in the early



days we figured that there was sufficient water, notwithstanding the fact that we had dry years. We have had dry years all during this time, but until the population became greater we tided through these dry years without serious losses.

In 1919, on one farm of 160 acres that I operated, I lost the entire crop with the exception of six small loads of very inferior hay, and this was absolutely due to the shortage of water.

The CHAIRMAN. What would a normal crop have been, Mr. Pincock?

Mr. PINCOCK. In the neighborhood of \$2,500 on that farm; that is, in dollars and cents.

On the other farm that I operated, which is the farm I have lived on for 39 years, I planted 39 acres of sugar beets, and I failed to harvest a beet because of the shortage of water. I had about one-third of the farm in grain—that is, in wheat—and threshed only 165 bushels; this being also due to the shortage of water. I harvested only about 35 to 40 tons of hay on that farm, and this, too, was due to the shortage of water, and——

Senator ASHURST (interrupting). State how much you would have harvested.

Mr. PINCOCK. As a rule we have a yield of about \$3,000——

Senator ASHURST (interrupting). How many acres of sugar beets did you say, Mr. Pincock?

Mr. PINCOCK. Thirty-five acres.

Senator ASHURST. And what would you have harvested if you had had a normal crop and a full supply of water?

Mr. PINCOCK. I might make this statement, since we have been talking about this thing. I plowed under a crop of alfalfa, and plowed it good, and I worked it down and did just as though I was going to plant it in sugar beets; then I plowed it down the next spring and worked the surface of the soil, and it yielded 25 tons to the acre.

The CHAIRMAN. Then it is the difference between 25 tons to the acre as against nothing?

Mr. PINCOCK. That is the condition. I was going to say the value of a full water right, the farm I spoke of first was subirrigated, the water fell; that is, the sub went down about the time the crop started and when it was needed it was all gone. There is some soil here that can not be surface irrigated successfully. One of the best sections of this valley is the Egin Bench, which is subirrigated. But without water for surface irrigation there is no water for subirrigation. With a water shortage our subirrigation fails, the land seems to bake and there is nothing to do.

Senator GOODING. This is one of the serious things with a water shortage. I am operating under the same conditions, and we can not expect to raise a crop without sufficient water.

Mr. PINCOCK. Gentlemen of the committee, I do not desire to take up all the time, but I want to make this statement, and that is that the land in this Snake River Valley—I am now speaking of the bottom land—is absolutely worthless without water. Senator Gooding has called our attention to people that are living in shacks. They are living in shacks because the land is worthless, and without water it is impossible for them to raise anything; therefore, it is impossible



for them to have anything better than shacks to live in. With plenty of water this country can not be excelled.

Senator ASHURST. I am sure that we are going to explore this record, and I should like to have stated here the value of the crops in this valley for the various years in dollars and cents.

Congressman WINTER. Do you refer to these particular lands, Senator Ashurst?

Senator GOODING. What you are trying to get at is the loss on account of water shortage, is it not, Senator Ashurst? There was a general loss in 1919 when there was a drought; I think that has been put in the record.

Senator ASHURST. I am sure that other Senators will want to know what the total value of the crop would be in a lean year, in a medium year and a good year, if you had all the water you needed.

Mr. PINCOCK. I will take it that this year is a lean year, and that the value of the crop this year would be the value in a lean year, or about \$5,100,000.

Senator ASHURST. That is just on this 170,000 acres?

Mr. PINCOCK. I would say about \$1,700,000.

Senator ASHURST. And what would it be in a medium year?

Mr. PINCOCK. About double that, or \$3,400,000 of agricultural crop.

Senator ASHURST. And if you had a bounteous year?

Mr. PINCOCK. I estimate that it would be about four times that, or \$6,800,000.

Senator ASHURST. Then, by reason of the shortage of water, this valley suffers the difference between \$1,700,000 and \$6,800,000?

Mr. PINCOCK. That is true.

#### STATEMENT OF T. W. SMITH, REXBURG, IDAHO

The CHAIRMAN. Will you please state your name and occupation, and whom you represent, Mr. Smith.

Mr. SMITH. My name is T. W. Smith, and I live at Rexburg. I represent the Eastern Idaho Fish and Game Protective Association, being a member of the committee appointed by that association to be here to-day. The other two members are Hon. Walter Newcomb, State Senator from Bannock County, and Hon. Hall Egbert, State Representative from Fremont County. Our organization is the central organization of all the fish and game clubs from Pocatello on the south to Ashton on the north. It has a total membership of 4,500 citizens, and our object is to propagate and protect fish and game. We are actually engaged at this time in feeding in the rearing pond about 1,500,000 fish; about 350,000 at Pocatello; about 800,000 on Little Piney; and about 400,000 on the banks of Henrys Lake. We have our program outlined for the handling of about 500,000,000, but we have been handicapped in securing fingerling native cut-throats, therefore, we have taken the Eastern Brook and the Rainbow Trout. We prefer the Native Cut-throat in this upper country, which is his natural home. In the State of Idaho there are two places where the Native cut-throats can be had successfully, one is at Henrys Lake and one is in Northern Idaho. The only other area satisfactory for the development of this fish is this Bechler River Reservoir, and we are interested in this from

the standpoint of getting more fish and also providing water for the farmers.

This feeding and rearing is done entirely by contributions of the people in this country. We are interested in this project from the standpoint of good fishing and good hunting. We are also interested in making Idaho one of the greatest playgrounds of the country and making it a paradise for the lovers of the great out doors, and we are providing them with the fish that they may enjoy real fishing. If we can rear these fish, and secure the fingerlings and fry, we can accomplish a great good in this regard.

Congressman SINNOTT. How much does the cutthroat grow to weigh in this section, Mr. Smith?

Mr. SMITH. I would say that the largest is in the neighborhood of five pounds.

Congressman SMITH. As I understand it, Mr. Smith, you are especially interested in this project in order to make this a place in which to rear these fish; that is the purpose of your organization.

Mr. SMITH. The bottom of this reservoir site is entirely gravel, and it is in just such a place as this that fish will thrive. Of course, Henrys Lake is a muddy bottom, but the fish may get out of there.

Congressman SINNOTT. What particular variety of fish are there up there, Mr. Smith?

Mr. SMITH. I have never investigated it, Congressman Sinnott.

Congressman WINTER. I think that that question was merely preliminary; the question he was about to ask was if he could go anywhere to catch one.

Congressman SMITH. I infer from what Senator Kendrick said that there are elk in that corner of the park.

Senator KENDRICK. I have no such idea, Mr. Smith; I do not know anything about that.

Congressman SMITH. Do any elk winter in there?

Mr. SMITH. The information we have from casual investigation is that no elk winter in the Bechler Basin, but game come in in small numbers; they stray down into this forest reserve because it is lower. Members of this association intend to make a game preserve of this land from Fall River north to the North Fork, because the elk do get in there and it is here that great numbers are killed. You will find that game will be around in this vicinity; that is, around the edge of this basin. I know that we saw very distinctly where a moose had been through just a few minutes before we were; but they can not stay right in there in the winter time.

Congressman SINNOTT. You will find them, of course, where there is a warm spring, or such as that?

Mr. SMITH. There would not be enough feed here to supply any number of them.

Congressman SMITH. So that the game protection question does not enter into this now?

Mr. SMITH. That particular section is not adapted to game, either in the summer or winter.

Congressman SMITH. The question of camping was discussed. It has been claimed that this is a good camping ground. Now, is it not a very dangerous place to camp because of dry grass? Do you think when people camp they would go out in a sunny meadow like that to camp?



Senator KENDRICK. I think, Congressman Smith, that you will be reminded of the clumps of pine trees at very convenient places to the banks of the streams. I would call it a splendid place to camp, and I would be unafraid of fires; I looked upon it as a place to fish and camp. Compare the number of people who are camping here now and the number who are coming later, and we will see that all this ground is necessary. But what we must determine here is the need of this as compared to other needs.

Senator GOODING. You do not hold that it is a serious matter, Senator Kendrick?

Senator KENDRICK. I consider it is, while probably the camping is not a serious matter.

Mr. SMITH. I want to say that prior to the 1st of August one can not stay in that country, as the ground is wet and the mosquitos and horseflies too annoying. After the middle of August they disappear and the ground is dry enough to camp on.

Congressman SINNOTT. Are you familiar with the country below Colanade Falls?

Mr. SMITH. There are camping sites in there.

Congressman SINNOTT. Are you familiar with the territory; that is, are you acquainted with it?

Mr. SMITH. I am not very well acquainted with it.

Mr. EGBERT. May I say that where the contour of the lake will be between that and the falls there will be any amount of good camping places.

Congressman SINNOTT. About the falls above Treasure Island?

Mr. EGBERT. Yes; when the road is constructed there are good camping places there.

The CHAIRMAN. Mr. Egbert, will you state your name, your occupation and whom you represent?

Mr. EGBERT. My name is Hall Egbert. I am a farmer and stockman.

Congressman SMITH. How long have you lived in that vicinity, Mr. Egbert?

Mr. EGBERT. Thirty-two years. I have a ranch within 4 miles of Yellowstone Park.

The CHAIRMAN. Have you anything else to offer the committee at this time?

Mr. EGBERT. I think not at this time.

#### STATEMENT OF HON. FRED T. DUBOIS, DUBOIS, IDAHO

Mr. DUBOIS. Mr. Chairman, members of the committee, and ladies and gentlemen, it has been some time since I addressed Senators of the United States and you, ladies and gentlemen, in this section of Idaho. I think I used to address both of you about the same time, and that was some years ago. I stopped public speaking at about that time. I do not care to take up the time of this committee because they have been very patient, and I do not feel that it is necessary that I should discuss this matter long. The committee has been over the ground, they have seen this country and have seen the proposed reservoir site. I know that their minds must be made up.

The national parks are of tremendous interest to the people of the United States, and especially so is Yellowstone National Park.

There is not a Senator or a Member of Congress from any State who would care to despoil it for commercial purposes, not one. Two attempts have already been made to take the water out of the lakes of Yellowstone Park, but they have been without success. Senator Walsh of Montana got a bill through one body of Congress to take water out of the Yellowstone Lake, and I will guarantee that every Senator from the Eastern States would not support a matter of this kind again. And when it comes to the Senators from the West, the Middle West, and the South, they are very jealous of our national park. If we eliminate this area from the park we will set a precedent, a bad precedent, and we, of Idaho, will be the ones to set the precedent. I object strenuously on behalf of the people of the State of Idaho.

Something has been said here about Jackson Lake. I went there from Cody, Wyo., on horseback with the head of the Reclamation Service—that was in 1901 or 1902, the year the reclamation act was passed. We went over that beautiful country, looked over some projects and came out and camped on Jackson Lake. There were 18 or 20 engineers; Mr. Pinchot, head of the Forest Service; Mr. Newell, head of the Reclamation Service; and Congressman Mondell, of Wyoming; and we all stopped at this lovely lake. It was a very beautiful lake, nestling there at the foot of the Tetons. While we were camped there at the lake, Congressman Mondell said to me, "Unfortunately Wyoming can not use these waters, and I am sure that the people of Wyoming will be glad to turn them over to you;" that is, to the people of Idaho. So you can see that I had something to do with that project.

I returned to the project some 20 years after it was completed, and when I saw that blackened waste, that ghastly, muddy bank—you can hardly find the lake at all—I said, "Will the Good Lord ever forgive me for what I had to do with that?" However, when I realize what it has meant to southern Idaho, I am satisfied with the work that I accomplished. But, after seeing Jackson Lake as it is now, I resolved that I would never have anything to do with a matter of this kind again.

Imagine, if you can, that road built up the Bechler River; you are traveling over it, there are those beautiful meadows, and the beautiful falls. What would you see after this reservoir had been in operation? You would see blackened and dead trees, and the black mud bank the same as you see in Jackson Lake. Do you think that you are going to cut all those trees out? You are not; that is only a dream, they will be there as they are in every reservoir which has ever been built. They would tax you people to death if you do all you promise to do to get this water.

I wish you could find a place somewhere out of the park; how I would like to aid you. I have been aiding irrigation in Idaho all my life, but I will never consent, neither will the people of Idaho consent, to the despoiling and desecrating of the national park at the expense of all the people in order to benefit a favored few.

What you people want is a road to "Old Faithful," over which you will pass through this wonderful valley, these green fields, through the forest reserve, and then these Bechler Meadows. It would indeed be the favorite entrance to Yellowstone Park. I think everybody in Idaho is interested in that.



We have in this State another wonderful playground, the Craters of the Moon National Monument. Congressman Smith, through his efforts, has made it a National Monument and no doubt it will be a national park. Travel is increasing daily through the Craters of the Moon; the Union Pacific Railroad will divert travel through there. We have the same thing here, but this is a question of whether we will have the road or the reservoir; you can not have the road and also have the reservoir. It is impractical to build the road up around the side of the hill or mountain. If you built the reservoir, that is the end of anyone ever seeing the beauties above the reservoir site; there is no way to get up there, and the most beautiful section of the national park will be denied to the people of the United States, to whom it belongs and was dedicated. In my judgment, Congress will never do it, if they do it is the end of our park. If our Senators are strong enough to be allowed to use the most beautiful portion of the park for commercial purposes, then every Senator will want to assert his rights by reason of the precedent established, and I do not want Idaho to be responsible for that precedent.

I want to congratulate Senator Gooding and Congressman Smith for the wonderful display they have made here; very few could get a committee of the United States Senate together here. I am very glad, however, that they are here, because you people have had an opportunity to fully express your views. You have had an opportunity that comes to very few communities.

I also want to say here in behalf of Senator Nugent, the former Senator from our State, that he introduced the first bill creating this reservoir and tried to pass it. I also want to say in behalf of these men who have worked incessantly and have now given you the fullest opportunity to explain the situation to a committee of the United States Senate, that you owe them all a debt of gratitude.

Mr. EGBERT. As a citizen of Idaho, I do not feel that I should let these remarks go without making a statement in regard to the proposition. Senator Dubois has stated that if the reservoir goes through we will have no road. I wish to state for the record that Mr. Albright, the superintendent of the park, claims that the reservoir will not interfere with the road. It is a positive fact that if the reservoir is built, as it is now proposed, it will be possible to build the road and gain elevation so that one will be able to see all the falls. I have ridden that country, by permission, many times. In 1919 I had permission to ride the park wherever I cared to go, and I know every inch of it. I have built roads all my life, and I want to say that it is utterly impossible to build this road along the bottom there, as has been suggested, and still be able to have the advantage of seeing the falls and other sights.

Senator ASHURST. Do you think that this project may be built and not make such a failure as the Senator said was made at Jackson Lake?

Mr. EGBERT. Yes; I do.

The CHAIRMAN. The time has now arrived when this committee is compelled to adjourn. On behalf of the committee, I want to thank the people of this community for the kind and courteous attention they have given us to-day, and I assure you that it has been thoroughly appreciated.

Mr. FULLER. As president of the Fremont-Madison Reservoir Association, I desire to extend the thanks of the entire district of Fremont and Madison Counties, as well as the State of Idaho, to the Representatives of Congress who have investigated our proposition of the elimination of the Bechler Meadows from the Yellowstone National Park. It has been suggested that an expression be made of our desires here as to whether or not we are in favor of the Bechler Meadows Reservoir, and I would therefore ask that all those who are in favor of the Bechler River Reservoir arise at this time.

(Whereupon the entire audience, with the exception of the committee, the newspaper reporters, and Mr. Dubois and Mr. Gregg, arose.)

Mr. FULLER. Now, then, all of those who are opposed may arise. (Whereupon no one arose.)

### STATEMENT OF M. J. KERR

The CHAIRMAN. Give your name and occupation to the reporter.

Mr. KERR. My name is M. J. Kerr, and I am a farmer in this section. I wish to apologize for not being here at the hearing sooner; I was delayed and could not reach St. Anthony any earlier. I have been listening to the remarks which have been made that we are exceptionally fortunate in being able to secure your presence. I feel it proper to suggest to you that it is quite certain that these people, judging by the attention given, are very appreciative of the fact that you are here. I have lived here for 32 years and I know that there is no question but what these people, many of whom have made their homes here for a good many years, are sincere in this matter. It appears, from what I have heard, that there may be a few dead trees in these meadows or in this reservoir site, and I am sure that if these people have said they will move them that it will be done. I am sure that it would be proper for me to make a motion at this time that we extend to these gentlemen a vote of thanks, as evidence of our appreciation for the very kind attention they have given to the testimony we have had to offer here to-day. I now make a motion that we extend to them a vote of thanks as evidence of our appreciation, and I would ask that all who are in favor of extending a vote of thanks may express it now by a rising vote.

(Thereupon the entire audience arose.)

Congressman SMITH. Mr. Chairman, I submit for the record the following letter, transmitting a resolution adopted by the chamber of commerce of Pocatello, Idaho, urging the elimination of the southwest corner of the Yellowstone National Park:

POCATELLO CHAMBER OF COMMERCE,  
Pocatello, Idaho, August 16, 1926.

HON. ADDISON T. SMITH,  
*House of Representatives, Washington, D. C.*

DEAR MR. SMITH: The inclosed resolution has been adopted by the chamber of commerce of Pocatello relative to the segregation of Bechler Swamps for reservoir site.

Yours very truly,

E. J. FJELSTED, *Manager.*



## RESOLUTION

Whereas the State of Idaho is and in all probability always will be primarily an agricultural State; and

Whereas irrigation and reclamation has proven the value of this type of farming in the economic production of agricultural products; and

Whereas it has been proven necessary to conserve the maximum amount of water for irrigation purposes in Idaho to accommodate the increased areas of land possible of irrigation and to enhance the agricultural industry and promote its enlargement and increased acreage all possible; and

Whereas there is located in the southwest section of the Yellowstone National Park a reservoir site in the section known as the Bechler River Swamps; and

Whereas it requires an act of the United States Congress to segregate this site from Yellowstone National Park before it can be used for reservoir purposes and reclamation of lands tributary thereto; Therefore, be it

*Resolved*, That the Pocatello Chamber of Commerce, feeling that this segregation is sound economy for the agricultural interests of the State of Idaho, respectfully request Idaho's Senators and Representatives to urge the early segregation of this tract of land from the Yellowstone National Park, designating its use for water-storage purposes. Be it

*Further resolved*, That a copy of this resolution be sent to Senators William E. Borah, Frank R. Gooding, Representatives Burton L. French and Addison T. Smith, and that a copy be spread on the minutes of this organization.

Respectfully submitted,

E. J. FIELSTED, *Manager*.

POCATELLO, IDAHO, August 15, 1926.

Congressman SMITH. I also submit the following affidavit, which I desire to have inserted in the record:

STATE OF IDAHO,

*County of Bannock, ss:*

Philip Stalker, being first duly sworn upon his oath deposes and says: That during the month of October, 1912, with a detachment of troops from the Fourteenth Regiment of Cavalry, he made a trip into the region known as the Fall River Basin, in the southwest corner of Yellowstone Park. At that time and during our stay of about 10 days I made a rough contour sketch of the basin, and believe that I became familiar with the general lay of the land and other conditions in this region.

The scarcity of big game was particularly noticeable, as compared with other sections of the park.

Since that time I have made a number of trips through the park and on three different occasions have been in the Fall River Basin, and find that during the early summer months it is a most undesirable place to camp and fish. The swamp land along the river is so badly infested with mosquitoes that it is impossible to stay there any length of time.

That my last visit to this section of the park was made July 4, 1926.

That I am at present president of the Bannock County Sportsman's Association, and as such I am very much interested in the conservation of our national playground, conservation of wild game, and the conservation and propagation of fish; that I have been interested in such matters for several years past, and it is my opinion that the withdrawal of the land sought to be used for a reservoir site for the storage of water for irrigation purposes will not in any way interfere with the scenic beauty of the park or with the park as a reserve for big game, and the building of such a reservoir will in my opinion greatly increase the value of the park as a fishing resort.

It is a known fact that where waters from mountain streams are used for irrigation purposes and the water of all the mountain streams in the country near the park has been appropriated for irrigation purposes, and that a dam or reservoir near the source of any mountain stream will do more to conserve the fish supply than any other measure. This fact is recognized by sportsmen and fish conservationists for the reason that when water is used extensively for irrigation purposes, in the dry part of the season when the rivers and creeks are materially lower, the fish follow the water down and many of them are lost in the diversion canals, and where the waters are conserved in a dam at the head of the source the fish naturally travel to that source and all of the fish that are raised or propagated above the dam will be saved.

An investigation of fish conditions in the Hebgen Dam, on the Madison River, just outside the western boundary of Yellowstone Park, the Jackson Lake Reservoir in the Jackson Hole country, just outside the southern boundary of the park, and the Henrys Lake Reservoir, in close proximity to the southwestern boundary of the park, will establish the value of reservoirs.

It has been the experience of men who have lived in this section of the country since its earliest settlement, and more particularly since the automobile has come into use, that the fish supply is diminishing at an alarming rate. Some measures other than the ones we have at present must, be instituted very shortly if we expect to save any portion of this supply that we have at present, and I consider the building of the present reservoir an opportunity to increase our fish supply without additional costs to the Government and at the same time provide necessary irrigation water for farmers who will be served by the building of the reservoir.

PHILIP STALKER.

The CHAIRMAN. Gentlemen, inasmuch as there are no further witnesses to be heard, the committee will now adjourn to meet subject to the call of the chairman. But before doing so I wish to state that any further data, especially the report to be submitted by Mr. Swendsen on other available reservoir sites, which is to be presented to the committee at a later date will be inserted in the record at the close of to-day's proceedings.

(The data thus submitted is inserted in the record, as follows:)

STATE OF IDAHO,  
DEPARTMENT OF RECLAMATION,  
Boise, November 29, 1926.

Hon. ROBERT N. STANFIELD,  
*Chairman Committee on Public Lands,  
United States Senate, Washington, D. C.*

MY DEAR SENATOR STANFIELD: At the hearing before your Committee on Public Lands in session at St. Anthony during the recent summer, you requested me, and I promised, to send you some additional data on the possibility of securing storage outside of Yellowstone Park to take the place of the proposed Bechler River Reservoir, which is included in the area that will be eliminated from the park if the pending Yellowstone bill is amended, as per the Smith offering.

Having already discussed this subject before your committee and with a desire to supply your honor with the best possible information on the subject, I employed Mr. A. J. Wiley, an engineer of broad experience and, undoubtedly, the best authority on reservoirs and dams in the West, to inquire into the matter and prepare a report on the same. Mr. Wiley has completed his report and I am transmitting herewith two copies thereof for your committee.

Thanking you and the committee for the many courtesies extended in the matter, I remain

Respectfully yours,

W. G. SWENDSEN.

REPORT ON THE FEASIBILITY OF RESERVOIR SITES OUTSIDE THE YELLOWSTONE NATIONAL PARK IN PLACE OF THE BECHLER MEADOWS SITE FOR THE FREMONT-MADISON RESERVOIR CO.

BOISE, IDAHO, November 6, 1926.

Mr. WARREN G. SWENDSEN,  
*Commissioner of Reclamation, State of Idaho, Boise, Idaho.*

DEAR SIR: At your request I have investigated the possibility of securing a reservoir site outside of the Yellowstone National Park as a substitute for the Bechler Meadows site within the park boundaries, application for which has been made by the Fremont-Madison Reservoir Co.

The lands to be served by the reservoir are located in the vicinity of Ashton, St. Anthony, and Rexburg, Idaho, and are at the extreme upper end of the irrigable area on the North Fork of Snake River. They are now served by canals and complete distribution systems but are greatly handicapped by a severe water shortage in the latter half of the irrigation season. The locality has been



found to be eminently suited to the production of seed crops and especially of seed peas, which on adjacent irrigated areas owning prior water rights and a more nearly adequate water supply, has grown to be a very large and profitable industry. The lands in question have been found to be fully as well suited to the production of seed crops, but the frequently recurring seasons of water shortage make the returns too precarious to be profitable either for seed crops or for ordinary irrigated farm crops. There is ample water in the source of supply for the full irrigation of the lands, but storage in reservoirs is necessary to utilize it.

The present water supply is derived from canals heading on Fall River, a tributary of the North Fork of Snake River, and the proposed Bechler Meadows reservoir site is located on a tributary of Fall River, so that water released from the reservoir would feed directly into the canals.

The natural location for a reservoir for the lands is at some point on Fall River or its tributaries lying above the heads of the canals, and the Bechler Meadows site is ideal in this respect. (See opposite page.) This site is also especially suitable for a reservoir, because the flooded area is a broad, flat tract of swamp or meadow land which would require a low dam of simple, cheap, and safe construction, with the foundation under the main part on solid bedrock now exposed across the river channel. Because of opposition to the use of the Bechler Meadows site by park officials and other interested parties and assertions that there were other practicable storage sites available outside of the park boundaries, an investigation has been made of all possible sites outside the park that might be used as a substitute for the Bechler Meadows site.

Obviously the most practicable if not the only feasible site for a reservoir serving the canals diverting from a stream will be on the stream or its tributaries above the head of the canals, and the only part of the Fall River drainage basin outside the park is on the stretch of river about 10 miles long between the south line of the park and the head of the Fall River canals.

An inspection of this section of the river showed it to be most unpromising as a possible location for a large reservoir or for any reservoir, but an instrumental survey was made of the Dog Creek site, where it had been claimed that a dam 240 feet high would store 180,000 acre-feet, or the same as the Bechler Meadows site.

The Dog Creek site is located just below the mouth of Winigar Creek, about three-fourths of a mile below the mouth of Dog Creek, and about 4 miles below the south boundary of the park. The dam site is formed by a slight contraction of the narrow river valley which forms the reservoir site, and its location immediately below the mouth of Winigar Creek adds Winigar Valley to the reservoir area.

Photographs of the reservoir and dam site are shown on the opposite page.

The survey was made for a reservoir with its flow line 240 feet above low-water level at the dam site, and it was found that this had a capacity of only 76,000 acre-feet, or less than half that required for the project. It was also found that the backwater from this reservoir would extend up the river beyond the park boundary almost to the foot of Cave Falls, so that apparently the permissible limit of height had been reached if not exceeded.

As the capacity of the 240 feet high flow line gave less than half the required amount of storage, an estimate was made upon a dam raising the water level 290 feet and giving a capacity of 150,000 acre-feet, which is the minimum that could be considered. This dam would, however, probably be objected to by the park officials as it would back the water up into the park to such an extent as to submerge Cave Falls.

The area which would be covered by the Dog Creek Reservoir is in a laval formation and at the dam site there is a well defined lava rim rock at the top of the canyon on the east side and some indications of laval rock in place on the right or west slope. On the east slope, below the rim rock, there appears to have been an extensive land slide through which the east end of the dam would have to penetrate.

It would take a long time and a large expenditure to locate the position of bedrock satisfactory for dam foundations at this site, and it has been necessary to assume a probable depth from the surface indications, which are not at all favorable. In fact, there is nothing to indicate this as a dam site except that the valley is a little narrower here than at any other point.

The dam for the 150,000 acre-feet capacity reservoir would be 2,300 feet long on top and 350 feet long at the bottom. It would be 300 feet high above the stream level and 350 feet above assumed bedrock.





BECHLER RIVER RESERVOIR SITE



LOOKING EASTERLY ACROSS DOG CREEK RESERVOIR NEAR DOWNSTREAM  
EDGE OF DAM SITE OUTSIDE OF YELLOWSTONE NATIONAL PARK





UPSTREAM VIEW OF DOG CREEK RESERVOIR OUTSIDE OF YELLOWSTONE  
NATIONAL PARK



LOOKING EASTERLY ACROSS DOG CREEK RESERVOIR NEAR UPSTREAM  
EDGE OF DAM SITE OUTSIDE OF YELLOWSTONE NATIONAL PARK



This is a dam of unprecedented magnitude and would require about three times as much concrete as the great Arrowrock Dam on the Boise River.

An estimate was made of the ordinary type of massive concrete dam of the same type as the Arrowrock Dam with the following result:

*Estimate of concrete dam*

Diversion and care of river.....	\$25, 000
311,000 cubic yards wet excavation of dam base, at \$3.....	933, 000
359,000 cubic yards dry excavation of dam base, at \$3.....	718, 000
2,460 cubic yards solid rock in trenches, at \$6.....	14, 760
20,000 cubic yards spillway excavation, at \$1.50.....	30, 000
1,910 cubic yards spillway concrete, at \$15.....	28, 650
87,800 pounds steel in spillway gate, at 15 cents.....	13, 340
8,900 linear feet drilling in grout holes, at \$1.50.....	13, 350
4,460 linear feet drilling in drain holes, at \$1.50.....	6, 690
425 grout-hole connections, at \$3.....	1, 275
2,250 linear feet drain-pipe connections, at 25 cents.....	560
200 cubic yards pressure grouting, at \$45.....	9, 000
46,300 linear feet drain pipes, at 25 cents.....	11, 575
1,663,000 cubic yards concrete, at \$9.....	14, 967, 000
9,370 linear feet copper seals, at \$1.75.....	16, 400
3 sluice gates.....	42, 610
6, 58-inch needle valves.....	90, 000
206,000 cubic yards back fill, at \$1.....	206, 000
	<hr/>
	17, 127, 210
Engineering, superintendence, and contingencies, 15 per cent.....	2, 569, 790
	<hr/>
150,000 acre-feet storage, at \$131.....	19, 697, 000

This cost of \$131 per acre-foot is nearly eight times as much as the acre-foot cost of the Arrowrock Reservoir and about twenty times as much as the American Falls, or as the proposed Bechler Meadows site, and it is apparent that such a cost places a reservoir at this site entirely beyond the realms of possibility.

For a dam of such a great height, a solid concrete gravity dam, such as that estimated upon above, would be the preferable type but as the cost of this construction would be so enormous, an estimate has also been made of a rock fill dam, as follows:

*Cost of rock fill dam*

Diversion and care of river.....	\$20, 000
221,500 cubic yards stripping dam base at \$1.....	221, 500
146,200 cubic yards face trench excavation at \$2.50.....	365, 500
2,460 cubic yards solid rock trench excavation at \$6.....	14, 760
25,000 cubic yards spillway excavation at \$1.50.....	37, 500
2,000 cubic yards spillway concrete at \$15.....	30, 000
87,800 pounds steel in spillway gate at 15 cents.....	13, 170
8,900 linear feet drilling grout holes at \$1.50.....	13, 350
425 grout hole connections at \$3.....	1, 275
200 cubic yards pressure grouting at \$45.....	9, 000
4,500,00 cubic yards loose rock fill at \$1.50.....	6, 750, 000
231,000 cubic yards hand placed rock at \$2.50.....	577, 500
108,000 cubic yards concrete facing at \$15.....	1, 620, 000
206,000 cubic yards back fill at \$1.....	206, 000
1,450 linear feet outlet tunnel at \$100.....	145, 000
1,500 linear feet 96-inch steel pipe at \$45.....	67, 500
2 sluice gates.....	30, 000
2 needle valves.....	30, 000
	<hr/>
	10, 152, 055
Engineering, superintendence and contingencies, 15 per cent.....	1, 522, 945
	<hr/>
150,000 acre-feet storage at \$77.....	11, 675, 000

This estimate shows that a rock fill dam could be built at this site for little more than half the cost of a solid concrete dam. The resulting cost of \$77 per acre-foot of storage is, however, still far beyond the allowable limits of cost.



When it is known that Fall River between the park boundary and the Dog Creek dam site has an average fall of over 50 feet per mile, and that this whole stretch of river down to the head of the diverting canals flows in a nearly V-shaped canyon with practically no bottom lands outside the river channel, it will be seen that storage on Fall River outside the park boundaries is absolutely impracticable.

The claim that a practicable reservoir site may be found at the Winigar Hole Meadows as a substitute for the Bechler Meadows site is entirely without foundation. A reservoir entirely too small for the purpose might be made at this site, but the run-off of Winigar Creek and the local streams that might be diverted into the reservoir are absurdly inadequate to supply the requirements. Even if a reservoir of sufficient capacity could be created at Winigar Hole Meadows, the only adequate source of supply would be Fall River with a long diversion canal heading somewhere inside the park boundaries above Cave Falls.

There being no possibility of storage outside the park boundaries on Fall River or its tributaries, consideration was given to other possible locations of storage reservoirs. It would be physically possible to divert water for the land proposed to be served by the Fremont-Madison Reservoir Co. from either the North Fork of Snake River or from the Teton River. It must be understood that in order to be available to the lands in question the stored water must be dropped into Fall River above the head of all the canals, and to deliver the 150,000 acre-feet of storage during the latter half of the irrigation season from either the North Fork of Snake River or from the Teton River a diversion canal with a capacity of about 1,000 feet per second would be needed. This would require a canal about 40 feet wide on the bottom and 8 feet deep.

There are three possible reservoir sites on the North Fork. Henry Lake, which is far the most feasible up to possibly 100,000 acre-feet, the limit of its capacity, is already being used as a reservoir by other interests and can not be considered. Island Park, which would have both capacity and water supply, spreads out over a large area of lava country which is known to be so porous that the use of the site as a reservoir could not be considered.

The Flat Rock site is located only about 6 miles below the constructed Henry Lake Reservoir, and in low years it would require the entire flow of the river to fill the two reservoirs. Considering the many prior rights both for irrigation and power on the North Fork below Flat Rock and on the main river, it is evident that such exclusive use of the stream would not be permitted. In fact, about the only time in a low water year that storage on the North Fork would be permitted would be during the winter season and even such use would be at the expense of power plants now in operation.

The construction of a diversion canal taking water from the North Fork below Flat Rock reservoir site and dropping it into Fall River above the heads of the canals on that stream would be extremely difficult and expensive. No survey has been made of the route of such a canal but an inspection of the country to be traversed showed that it would have to cross many side streams flowing in deep and rugged canyons such as Warm River, Fish Creek, and Robinson Creek. The canal would probably be about 40 miles long with many expensive stream crossings.

Taking into consideration the insufficient water supply and the water-right interference in the storage at Flat Rock, together with the long and expensive diversion canal, the attempt to get storage on the North Fork for use of the canals on Fall River is altogether impracticable.

The Teton River was next considered as a source of stored water for the Fall River canals. This site is located at the lower end of Teton Basin where the river has cut a deep and narrow canyon through the lava flow which at one time closed the lower end of the valley. The basin above the canyon is wide and flat so that a dam raising the water surface 75 feet would cover about 7,000 acres and give about 150,000 acre-feet of storage. The construction of the dam would be comparatively simple but the purchase of the 7,000 acres of flooded area which is a rather low grade of farming land would be a large additional item of cost.

The acquisition of storage rights would be comparable to the situation on the North Fork of Snake River, but the run-off is much larger. The chief difficulty with the storage here as at the Flat Rock site on the North Fork is that the storage rights in low-water years will be confined to the nonirrigation season, and there will be interference with power rights during the winter season.

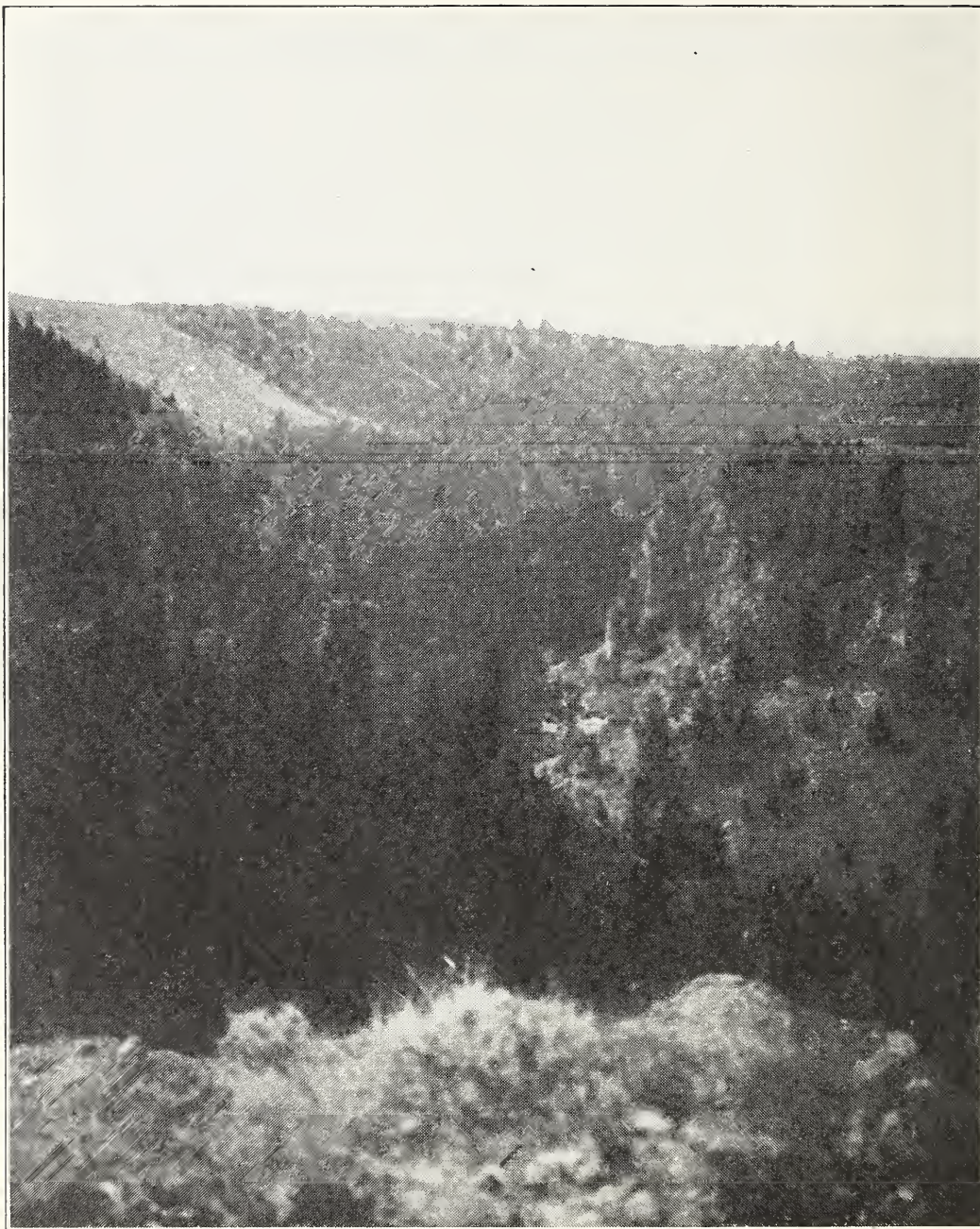
There is a serious diversion problem at this site as the river below the dam flows in a box canyon from which it must be diverted by a conduit or tunnel about 2 miles long. As a substitute for this a dam about 200 feet high could be used to





DOWNSTREAM VIEW OF NORTH FORK OF TETON RIVER AT CROSSING  
OF TETON RESERVOIR DIVERSION CANAL OUTSIDE OF YELLOWSTONE  
NATIONAL PARK





UPSTREAM VIEW OF NORTH FORK OF TETON RIVER CANYON AT CROSS-  
ING OF TETON RESERVOIR CANAL



raise the water out of the canyon and put it in a canal from which a tunnel 4,000 feet long would carry the water to Badger Creek. Thence a canal about 5 miles long and another tunnel of 4,000 feet would bring the diversion canal to the south side of the North Fork of the Teton at an elevation of about 700 feet above that stream which flows in a canyon so rugged and precipitous that to follow it up to cross at a lesser height would involve tunneling or equally expensive construction. This crossing, with a maximum depth of about 700 feet, would have a length of about half a mile and to provide a conduit with a capacity to carry 1,000 second-feet over such a canyon would be a most difficult engineering problem.

Photographs of the crossing are shown on the opposite page. After crossing the North Fork of the Teton, 5 miles of canal over a not specially difficult rolling country would bring the canal to the wide valley of Conant Creek. It would be necessary to make a long detour up and down the valley to secure a practicable crossing of this stream. The crossing of Squirrel Creek Valley would be very similar, and there are two other difficult valleys to cross before reaching Fall River.

In order to deliver the stored water above the heads of the canals on Fall River, it will be necessary to follow with the canal along the steep slopes of the Fall River canyon to within about 6 miles of the Dog Creek dam site.

From the rough reconnaissance of the possibility of using the Teton Basin as a reservoir site for the Fall River canals as a substitute for the Bechler Meadows site it is probable that the cost would be at least \$6,000,000 and may be much more.

The resulting cost of about \$40 per acre-foot of stored water is at least six times as great as the cost of the Bechler Meadows site or that of the American Falls reservoir, and twenty times as great as the Jackson Lake storage. It is far in excess of the ability of the land to pay.

The yearly maintenance and operation of the diversion canal would exceed the entire cost of the operation and maintenance of the present canal systems, which would still be necessary. The depreciation upon the immense siphons and bridges would be a further heavy burden upon the lands. The operation of a long line of canal, upon steep side hills and with unusually large and hazardous structures would be subject to great risk of interruption, and a water supply taken either from the North Fork of Snake River or from the Teton would be an exchange of the annual risk of a shortage in the supply for the constant danger of a failure in delivery.

Based upon the investigations as outlined above, I submit the following conclusions:

First. Storage is a vital necessity for the lands to be served by the Fremont-Madison Reservoir Co.

Second. Storage conditions at the Bechler Meadows Reservoir site within the boundaries of the Yellowstone National Park are very favorable and the cost is within the ability of the lands to pay.

Third. A careful study of all reservoir sites and sources of supply outside of the Yellowstone National Park shows that there is no possibility of providing storage for the Fremont-Madison Reservoir Co. at sites outside the boundaries of the park.

Respectfully submitted.

A. J. WILEY, *Consulting Engineer.*

(Whereupon, at 5.50 o'clock p. m., Wednesday, August 18, 1926, the hearing was closed and the committee adjourned to meet subject to the call of the chairman.)





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UNIVERSITY OF IDAHO, S. B.

**HISTORICAL MUSEUM**

ACCESSION